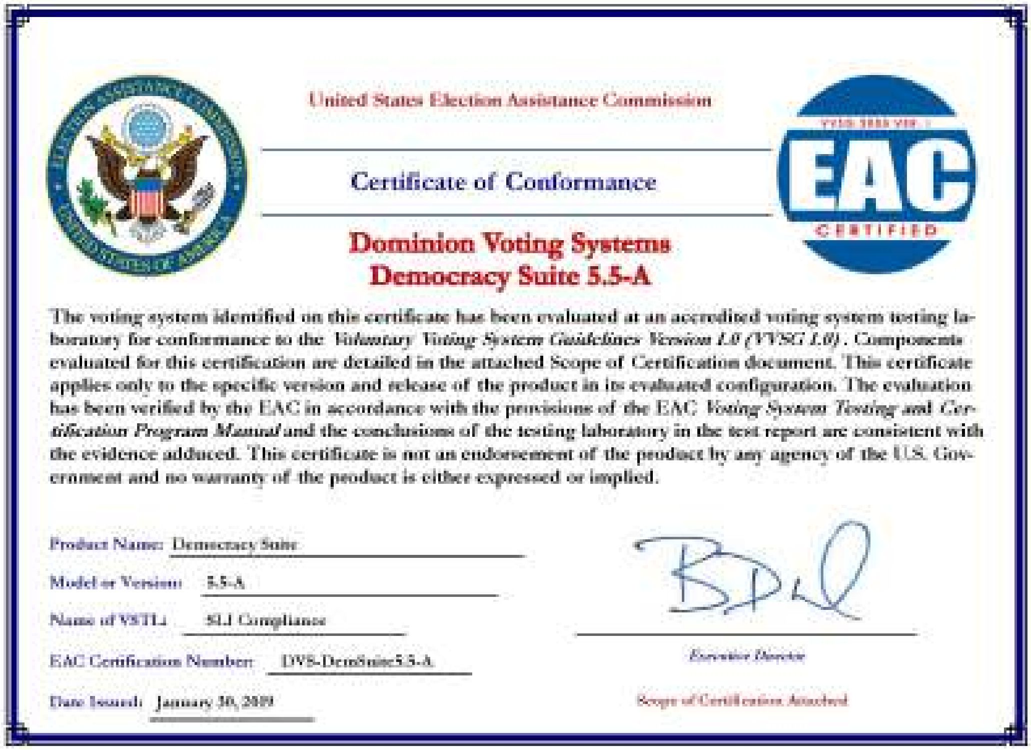
Attachment D – Mandatory Questions

File 0-1 EAC Certification

1 EAC Certified.

The proposed SVS must be certified by the U.S. Election Assistance Commission (EAC) and must have obtained (at minimum) EAC certification in conformance with the Voluntary Voting System Guidelines (VVSG) Version 1.0. Provide EAC certification documentation.

Below we provide the Certificate of Conformance issued by the EAC certifying Dominion's proposed solution. We would be happy to provide additional information or documentation upon request.



United States Election Assistance Commission

Certificate of Conformance

Dominion Voting Systems
Democracy Suite 5.5-A

The voting system identified on this certificate has been evaluated at an accredited voting system testing laboratory for conformance to the *Voluntary Voting System Guidelines Version 1.0 (VVSG 1.0)*. Components evaluated for this certification are detailed in the attached Scope of Certification document. This certificate applies only to the specific version and release of the product in its evaluated configuration. The evaluation has been verified by the EAC in accordance with the provisions of the EAC *Voting System Testing and Certification Program Manual* and the conclusions of the testing laboratory in the test report are consistent with the evidence adduced. This certificate is not an endorsement of the product by any agency of the U.S. Government and no warranty of the product is either expressed or implied.

Product Name: Democracy Suite
Model or Version: 5.5-A
Name of VSTL: SLI Compliance
EAC Certification Number: DVS-DemSuite5.5-A
Date Issued: January 30, 2009

Executive Director

Scope of Certification Attached

Attachment D – Mandatory Questions

File 0-2 Example Ballots

2 Voter-Handled Paper Ballot Verification.

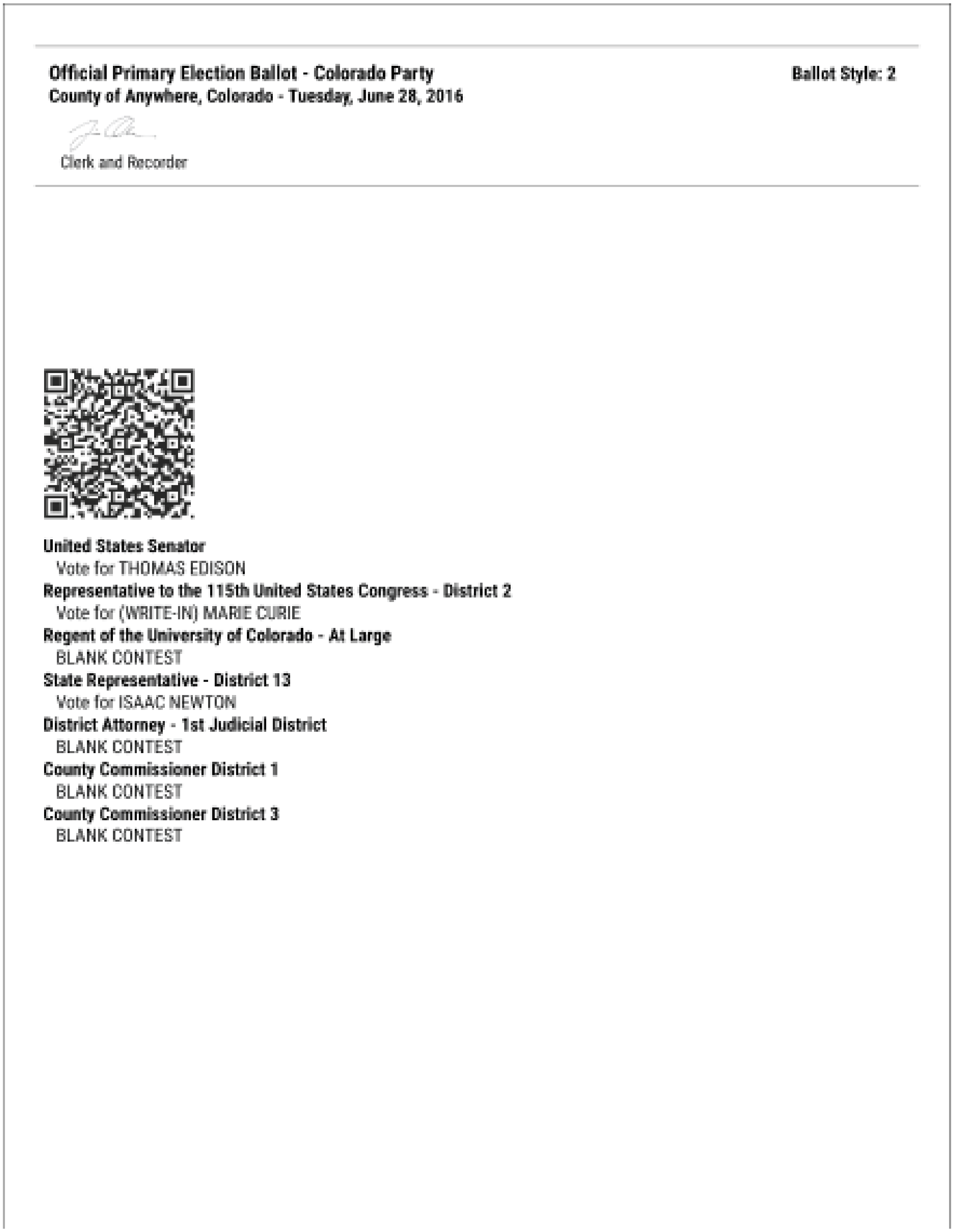
The proposed SVS solution must provide a voter verifiable paper ballot for every vote cast. The proposed SVS must produce a physical, voter-handled ballot containing the voter's selections from the input made by the voter. It must also facilitate navigating, marking, and reviewing the displayed ballot on the Ballot Marking Device (BMD) that can be printed, scanned, imaged, and tabulated by the Polling Place Scanner (PPS) and Central Scanning Device (CSD). Provide example BMD and Absentee by Mail ballots created by the proposed SVS.

Yes. The proposed solution provides a paper audit trail for each ballot cast.

ImageCast X

Voters using the ImageCast X Ballot Marking Device use the intuitive touchscreen to make their selections. Once the voter is finished navigating the contests and reviews their selections, the voter is prompted for a final review while being offered the option to print. Once satisfied, the voter prints a condensed ballot with a 2-D barcode for tabulation and a printed summary of the voter's selections. The voter has two options – they may approve their selections and insert the ballot into the precinct scanner as described above or they may ask a poll worker to spoil their ballot and request a second chance to mark another ballot. After they insert their ballot into a precinct scanner the ballot selections are tabulated, and the ballot is securely deposited into the ballot box.

A sample ImageCast X ballot is provided below:



Official Primary Election Ballot - Colorado Party
County of Anywhere, Colorado - Tuesday, June 28, 2016

Ballot Style: 2

Clerk and Recorder

United States Senator
Vote for THOMAS EDISON
Representative to the 115th United States Congress - District 2
Vote for (WRITE-IN) MARIE CURIE
Regent of the University of Colorado - At Large
BLANK CONTEST
State Representative - District 13
Vote for ISAAC NEWTON
District Attorney - 1st Judicial District
BLANK CONTEST
County Commissioner District 1
BLANK CONTEST
County Commissioner District 3
BLANK CONTEST

This printed paper ballot serves as the voter's official ballot and is submitted for scanning and tabulation using either the on-site precinct scanner or submitted for central tabulation.

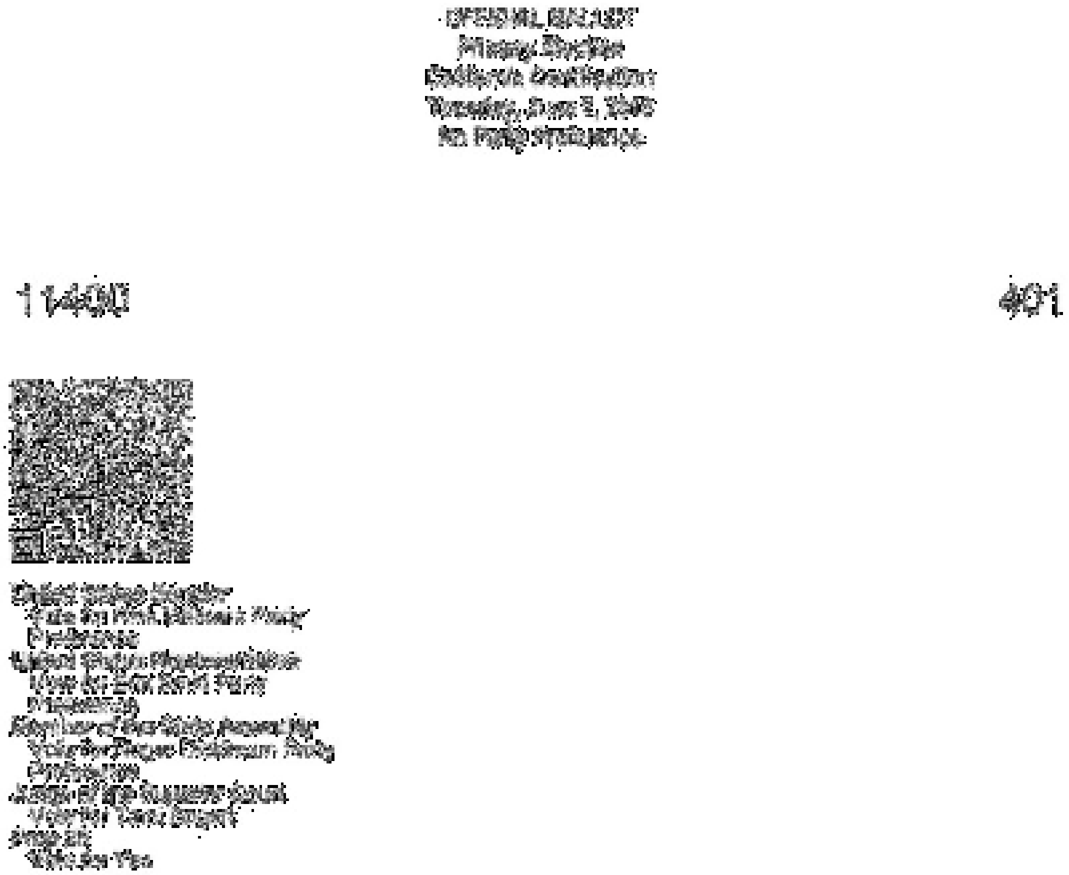
Additional information regarding the voting process is included in response to Attachment L and file 5-1 BMD as requested.

Uniformed Overseas Citizens Absentee Voting Act (UOCAVA) Ballot

Dominion offers a secure process for voters to register and vote remotely using the ImageCast Remote. The UOCAVA solution offers a secure and efficient method for voters with disabilities, military and overseas citizens, to receive, mark, print and return their ballot to their local elections office.

The solution is designed to meet the highest level of auditability, transparency, and security providing voters with confidence in the voting system.

Below we provide a sample UOCAVA ballot for your review:



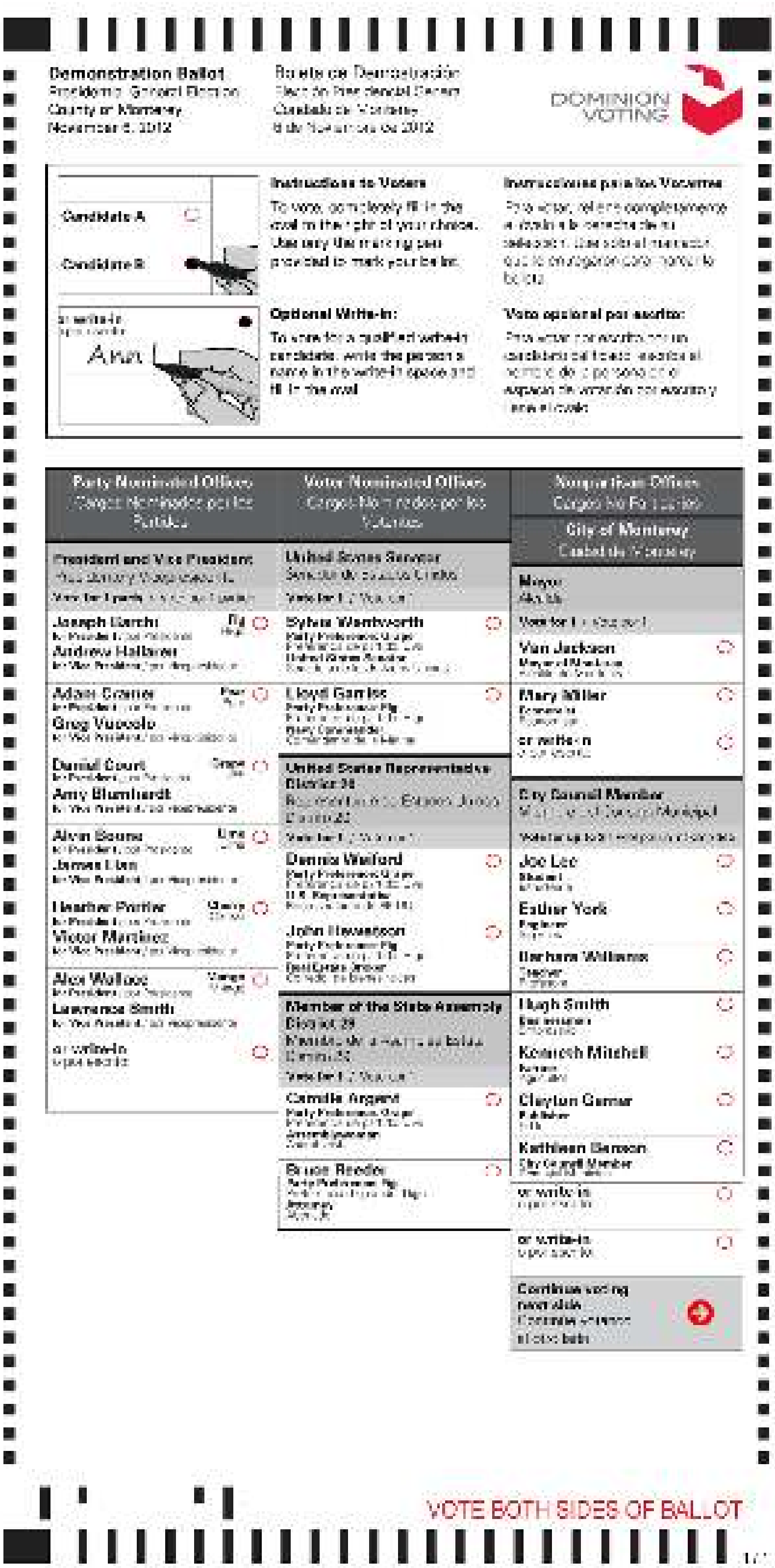
11400

401

Paper and Absentee Ballot

Paper and absentee ballots will always include a paper audit trail as each ballot is scanned at the precinct level, on the ImageCast Precinct, or at central tabulation using the ImageCast Central. A digital image of both sides of the ballot is created upon scanning, while the actual paper ballot is archived in its original format based on jurisdictional handling procedures. The digital ballot image(s) are appended with Dominion's patented AuditMark, which details the system interpretation of the voter's intent and additional scrutiny is available through the ImageCast Adjudication module. At any stage of the process the paper ballot can be retrieved as needed.   The full-size paper ballot is very similar to the ballot format the voters of Georgia have voted for years. Not much if any voter education will be needed for absentee voters except to inform them of enhanced accuracy available to the reading of their marks.

Below we provide two sample double-sided ballots:



Demonstration Ballot
Presidential General Election
County of Monterey
November 6, 2012

Boleta de Demostración

Instructions to Voters

To vote, completely fill in the oval to the right of your choice. Use only the marking pen provided to mark your ballot.

Instrucciones para los Votantes

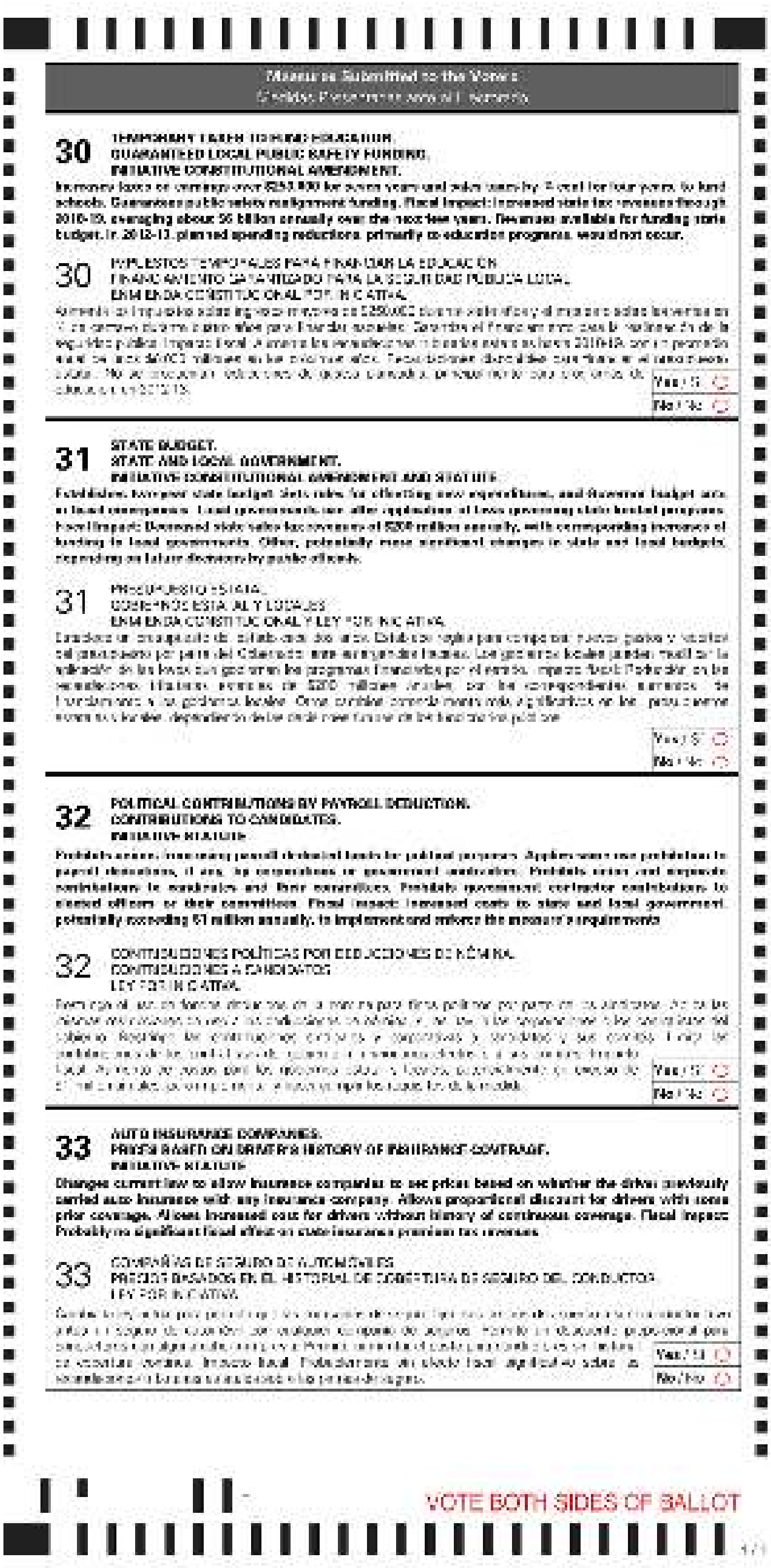
Optional Write-in:

To vote for a qualified write-in candidate, write the person's name in the write-in space and fill in the oval.

Voto opcional por escrito:

Party Nominated Offices	Voter Nominated Offices	Nonpartisan Offices City of Monterey
President and Vice President	**United States Senator**	**Mayor**
Joseph Barchi ○ **Andrew Hallaren**	**Sylvia Wentworth** ○	**Van Jackson** ○
Adam Cramer ○ **Greg Vuocolo**	**Lloyd Garriss** ○	**Mary Miller** ○
Daniel Court ○ **Amy Blumhardt**	**United States Representative**	or write-in ○
Alvin Boone ○ **James Lian**	**Dennis Weiford** ○	**City Council Member**
Heather Portier ○ **Victor Martinez**	**John Hewetson** ○	**Joe Lee** ○
Alex Wallace ○ **Lawrence Smith**	**Member of the State Assembly**	**Esther York** ○
or write-in ○	**Camille Argent** ○	**Barbara Williams** ○
	Bruce Reeder ○	**Hugh Smith** ○
		Kenneth Mitchell ○
		Clayton Garner ○
		Kathleen Benson ○
		or write-in ○
		or write-in ○
		Continue voting next side

VOTE BOTH SIDES OF BALLOT



Measures Submitted to the Voters
Medidas Presentadas ante el Votante

30 **TEMPORARY TAXES TO FUND EDUCATION. GUARANTEED LOCAL PUBLIC SAFETY FUNDING. INITIATIVE CONSTITUTIONAL AMENDMENT.**

Increases taxes on earnings over $250,000 for seven years and sales taxes by ¼ cent for four years, to fund schools. Guarantees public safety realignment funding. Fiscal Impact: Increased state tax revenues through 2018-19, averaging about $6 billion annually over the next few years. Revenues available for funding state budget. In 2012-13, planned spending reductions, primarily to education programs, would not occur.

30 IMPUESTOS TEMPORALES PARA FINANCIAR LA EDUCACIÓN. FINANCIAMIENTO GARANTIZADO PARA LA SEGURIDAD PÚBLICA LOCAL. ENMIENDA CONSTITUCIONAL POR INICIATIVA.

[illegible]

Yes / Sí ○
No / No ○

---

31 **STATE BUDGET. STATE AND LOCAL GOVERNMENT. INITIATIVE CONSTITUTIONAL AMENDMENT AND STATUTE.**

Establishes two-year state budget. Sets rules for offsetting new expenditures, and Governor budget cuts in fiscal emergencies. Local governments can alter application of laws governing state-funded programs. Fiscal Impact: Decreased state sales tax revenues of $200 million annually, with corresponding increase of funding to local governments. Other, potentially more significant changes in state and local budgets, depending on future decisions by public officials.

31 PRESUPUESTO ESTATAL. GOBIERNOS ESTATAL Y LOCALES. ENMIENDA CONSTITUCIONAL Y LEY POR INICIATIVA.

[illegible]

Yes / Sí ○
No / No ○

---

32 **POLITICAL CONTRIBUTIONS BY PAYROLL DEDUCTION. CONTRIBUTIONS TO CANDIDATES. INITIATIVE STATUTE.**

Prohibits unions from using payroll-deducted funds for political purposes. Applies same use prohibition to payroll deductions, if any, by corporations or government contractors. Prohibits union and corporate contributions to candidates and their committees. Prohibits government contractor contributions to elected officers or their committees. Fiscal Impact: Increased costs to state and local government, potentially exceeding $1 million annually, to implement and enforce the measure's requirements.

32 CONTRIBUCIONES POLÍTICAS POR DEDUCCIONES DE NÓMINA. CONTRIBUCIONES A CANDIDATOS. LEY POR INICIATIVA.

[illegible]

Yes / Sí ○
No / No ○

---

33 **AUTO INSURANCE COMPANIES. PRICES BASED ON DRIVER'S HISTORY OF INSURANCE COVERAGE. INITIATIVE STATUTE.**

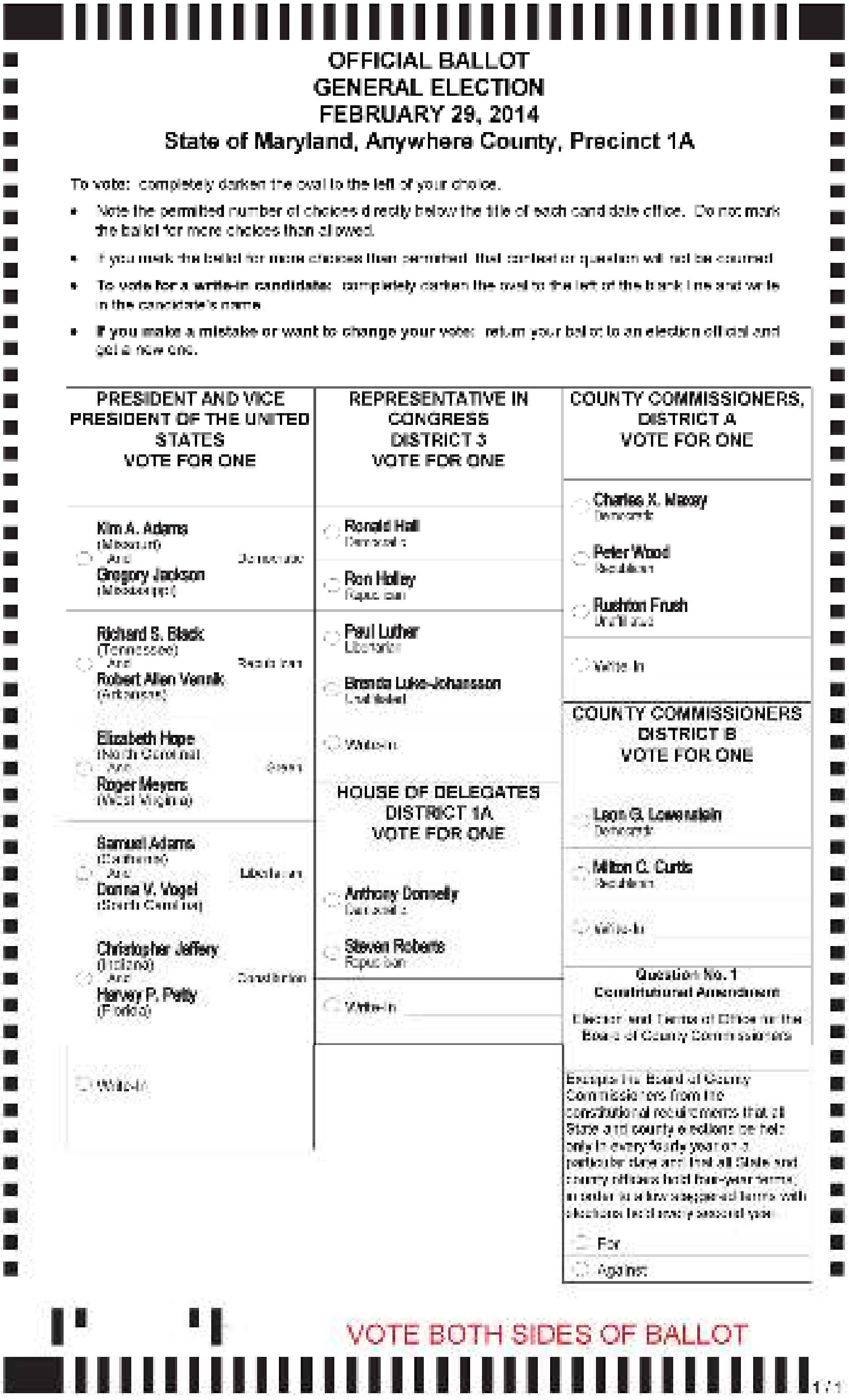
Changes current law to allow insurance companies to set prices based on whether the driver previously carried auto insurance with any insurance company. Allows proportional discount for drivers with some prior coverage. Allows increased cost for drivers without history of continuous coverage. Fiscal Impact: Probably no significant fiscal effect on state insurance premium tax revenues.

33 COMPAÑÍAS DE SEGURO DE AUTOMÓVILES. PRECIOS BASADOS EN EL HISTORIAL DE COBERTURA DE SEGURO DEL CONDUCTOR. LEY POR INICIATIVA.

[illegible]

Yes / Sí ○
No / No ○

VOTE BOTH SIDES OF BALLOT



OFFICIAL BALLOT
GENERAL ELECTION
FEBRUARY 29, 2014
State of Maryland, Anywhere County, Precinct 1A

To vote: completely darken the oval to the left of your choice.

- Note the permitted number of choices directly below the title of each candidate office. Do not mark the ballot for more choices than allowed.
- If you mark the ballot for more choices than permitted, that contest or question will not be counted.
- **To vote for a write-in candidate:** completely darken the oval to the left of the blank line and write in the candidate's name.
- **If you make a mistake or want to change your vote:** return your ballot to an election official and get a new one.

PRESIDENT AND VICE PRESIDENT OF THE UNITED STATES
VOTE FOR ONE

○ **Kim A. Adams** (Missouri) And **Gregory Jackson** (Mississippi) Democratic

○ **Richard S. Black** (Tennessee) And **Robert Allen Vennik** (Arkansas) Republican

○ **Elizabeth Hope** (North Carolina) And **Roger Meyers** (West Virginia) Green

○ **Samuel Adams** (California) And **Donna V. Vogel** (South Carolina) Libertarian

○ **Christopher Jeffery** (Indiana) And **Harvey P. Petty** (Florida) Constitution

○ Write-in

REPRESENTATIVE IN CONGRESS
DISTRICT 3
VOTE FOR ONE

○ **Ronald Hall**
Democratic

○ **Ron Holley**
Republican

○ **Paul Luther**
Libertarian

○ **Brenda Luke-Johansson**
Unaffiliated

○ Write-in

HOUSE OF DELEGATES
DISTRICT 1A
VOTE FOR ONE

○ **Anthony Donnelly**
Democratic

○ **Steven Roberts**
Republican

○ Write-in

COUNTY COMMISSIONERS, DISTRICT A
VOTE FOR ONE

○ **Charles X. Maxey**
Democratic

○ **Peter Wood**
Republican

○ **Rushton Frush**
Unaffiliated

○ Write-In

COUNTY COMMISSIONERS
DISTRICT B
VOTE FOR ONE

○ **Leon G. Lowenstein**
Democratic

○ **Milton C. Curtis**
Republican

○ Write-In

Question No. 1
Constitutional Amendment

Election and Terms of Office for the Board of County Commissioners

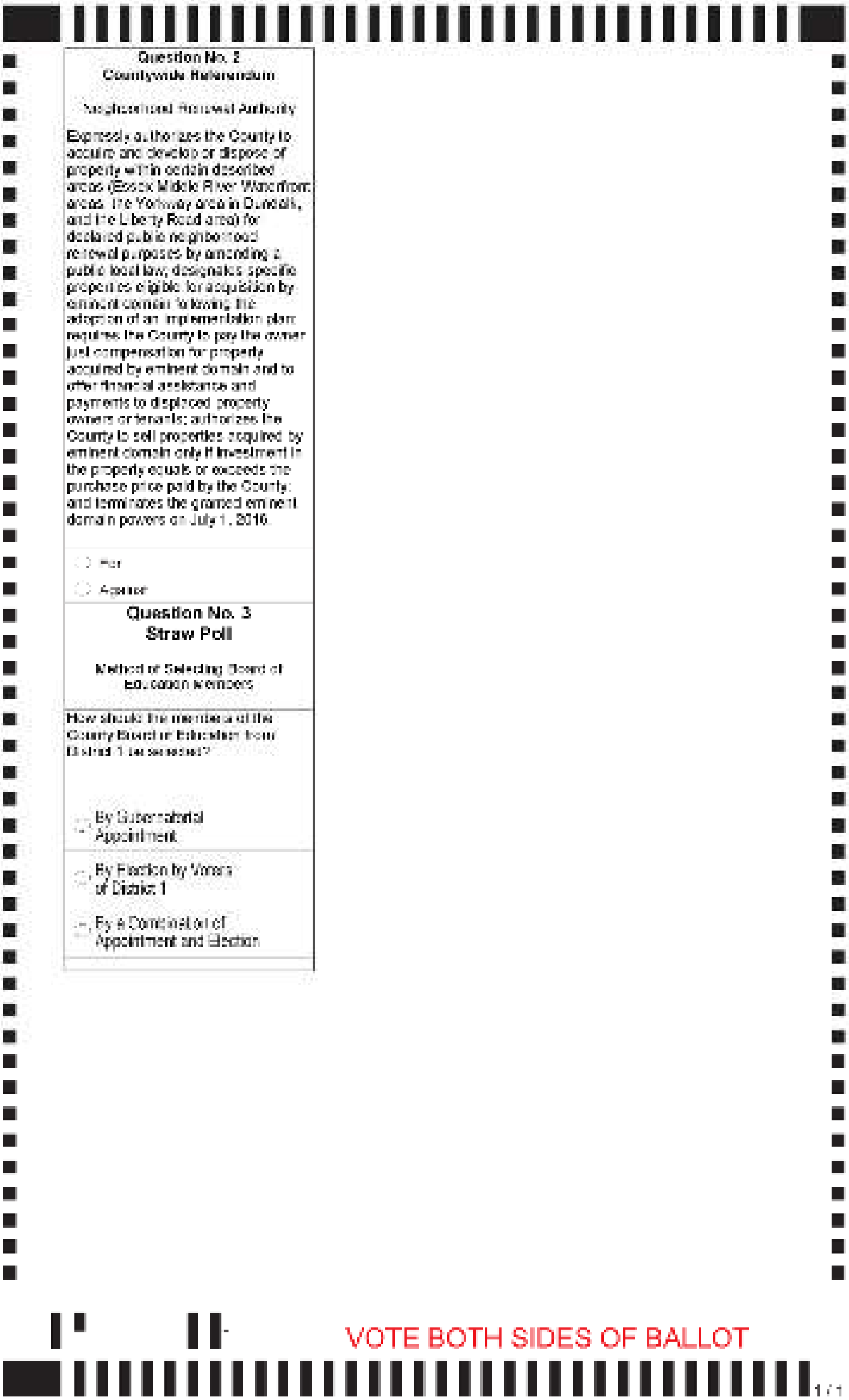
Exempts the Board of County Commissioners from the constitutional requirements that all State and county elections be held only in every fourth year on a particular date and that all State and county officers hold four-year terms, in order to allow staggered terms with elections held every second year.

○ For

○ Against

VOTE BOTH SIDES OF BALLOT

1/1



Question No. 2
Countywide Referendum

Neighborhood Renewal Authority

Expressly authorizes the County to acquire and develop or dispose of property within certain described areas (Essex Middle River Waterfront areas, the Yorkway area in Dundalk, and the Liberty Road area) for declared public neighborhood renewal purposes by amending a public local law; designates specific properties eligible for acquisition by eminent domain following the adoption of an implementation plan; requires the County to pay the owner just compensation for property acquired by eminent domain and to offer financial assistance and payments to displaced property owners or tenants; authorizes the County to sell properties acquired by eminent domain only if investment in the property equals or exceeds the purchase price paid by the County; and terminates the granted eminent domain powers on July 1, 2016.

○ For

○ Against

Question No. 3
Straw Poll

Method of Selecting Board of Education Members

How should the members of the County Board of Education from District 1 be selected?

○ By Gubernatorial Appointment

○ By Election by Voters of District 1

○ By a Combination of Appointment and Election

VOTE BOTH SIDES OF BALLOT

1 / 1

Attachment D – Mandatory Questions

File 0-3 Proposed SVS

3 State Level and EPoll Dataset-Building and Reporting

Supplier must propose a SVS solution that includes:

- State level ballot building (EMS)

- EPoll data set building and reporting (EPDMS),

- Electronic Poll Books (EPoll),

- Ballot Marking Devices (BMD),

- Polling Place Scanners (PPS),

- Central Scanning Devices (CSD),

- Consumables,

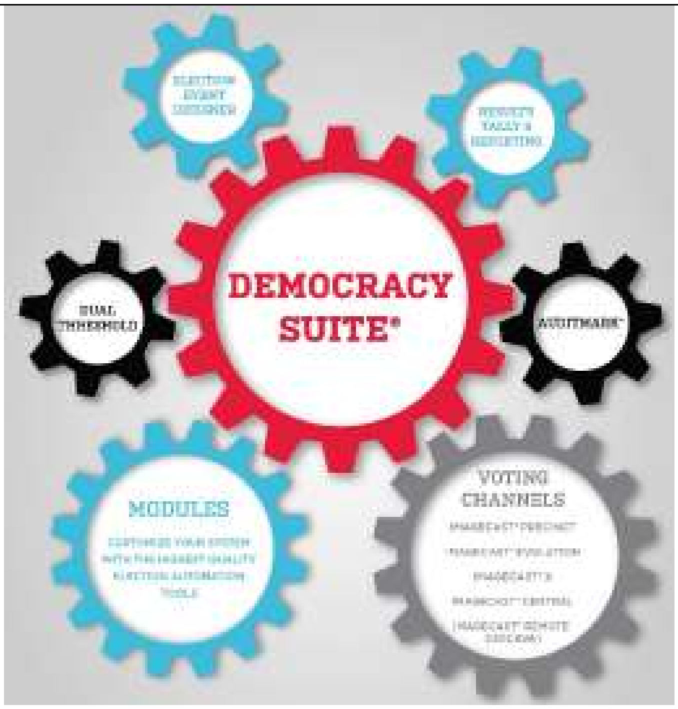
- and Peripherals

Provide the name and configuration of the product(s), product descriptions, and quantity proposed to be provided in the SVS (do not include cost).

Yes. The proposed solution from Dominion and KNOWiNK includes all of the noted solution requirements. Below we provide a high-level response detailing the name and configuration of the products as well as the proposed quantity when available:

- State level ballot building (EMS)

Ballot building is conducted using the Election Event Designer module of Democracy Suite, version 5.5A. Dominion is proposing 175 licensed copies of the Democracy Suite set of Products including 183 licenses of Adjudication, 175 licenses of Automated Test Decks, and 175 licenses of UOCAVA modules. The increased number of Adjudication Modules is due to select counties having more than one of each due to volume of absentee ballots printed and cast in major elections.



At the heart of our complete voting system solution is Democracy Suite, a robust and tested Election Management System that drives all voting channels out of a single comprehensive database; mail-in ballots, in person voting, accessible voting, and Uniformed Overseas Citizens Absentee Voting Act (UOCAVA)/Remote Accessible Vote by Mail(RAVBM). All pre-election and post-election tasks utilize the same database. From ballot layout to results reporting on Election Night, Democracy Suite is a complete, end-to-end elections solution that provides a single, powerful and versatile platform for election management.

Existing functionality and ongoing development of Democracy Suite centers around providing free and fair elections while considering the needs of our customers for easy to use and intuitive products, efficient processes, and accurate and transparent results for all ballots cast.

Democracy Suite is comprised of two modules: Election Event Designer and Results, Tally and Reporting.

- EPoll data set building and reporting (EPDMS)

ePulse is a secure web-based back-end election management system for use at the state and county level.

ePulse is an all-inclusive election management suite designed to give administrators real-time access to monitor their election as a whole. All Poll Pads can connect to this central hub where voter check-in data is securely transferred via WiFi or cellular networks in near real time. This tool allows for administrators to oversee the operation of individual precincts and Poll Pads including battery life of the device, average check-in times, number of ballots issued or spoiled and more; all the while ensuring the election authority can directly contact poll workers via video or text message for speedy trouble resolution.

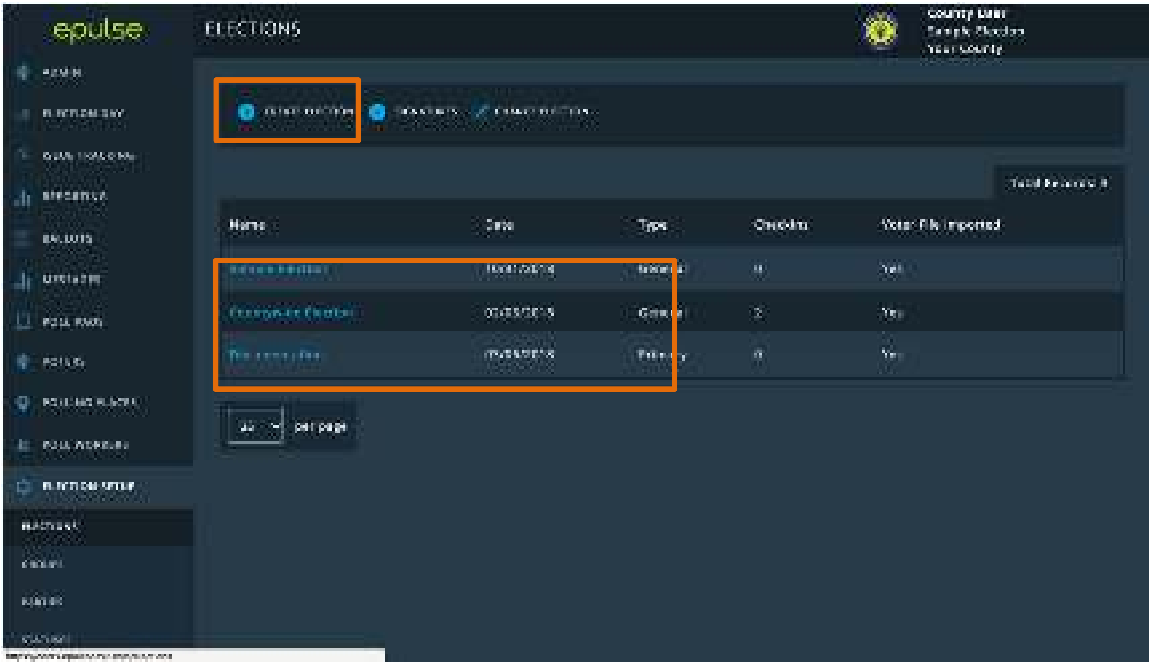
ePulse Capabilities

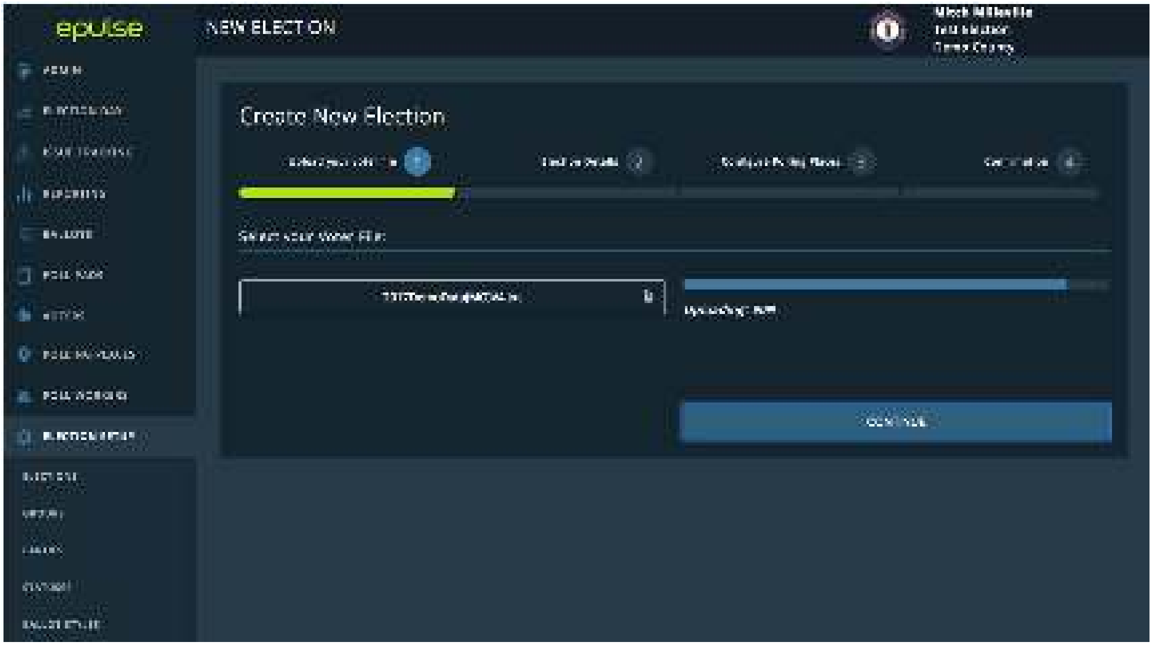
- Customizable real-time and
- election night reporting
- Ballot tracking
- Inventory tracking
- Election Day issue tracking
- Poll worker time-tracking
- Video communications from
- Poll Pads to ePulse
- Run concurrent elections
- Update voter rolls minutes before an election

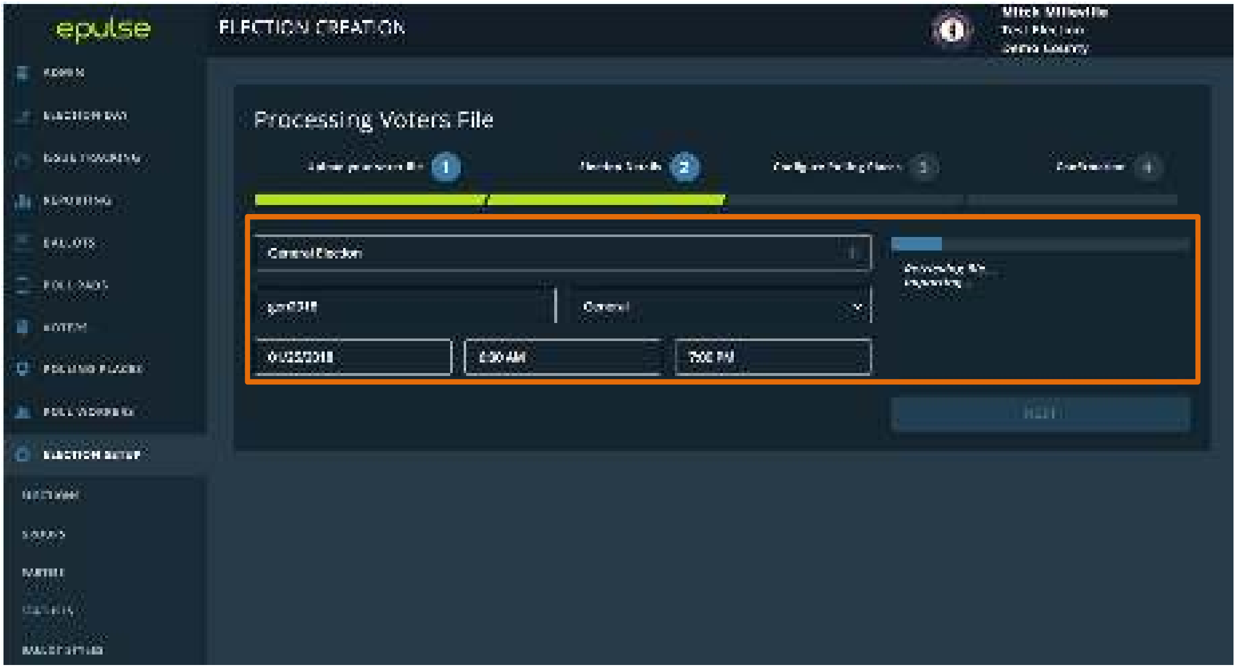
ePulse election monitoring dashboard. ePulse aims to be as intuitive and user-friendly as the Poll Pads themselves. These simple-to view dashboards give the user an overview of election data essentials which can be easily digested and exported into customizable

Data Set Building with ePulse

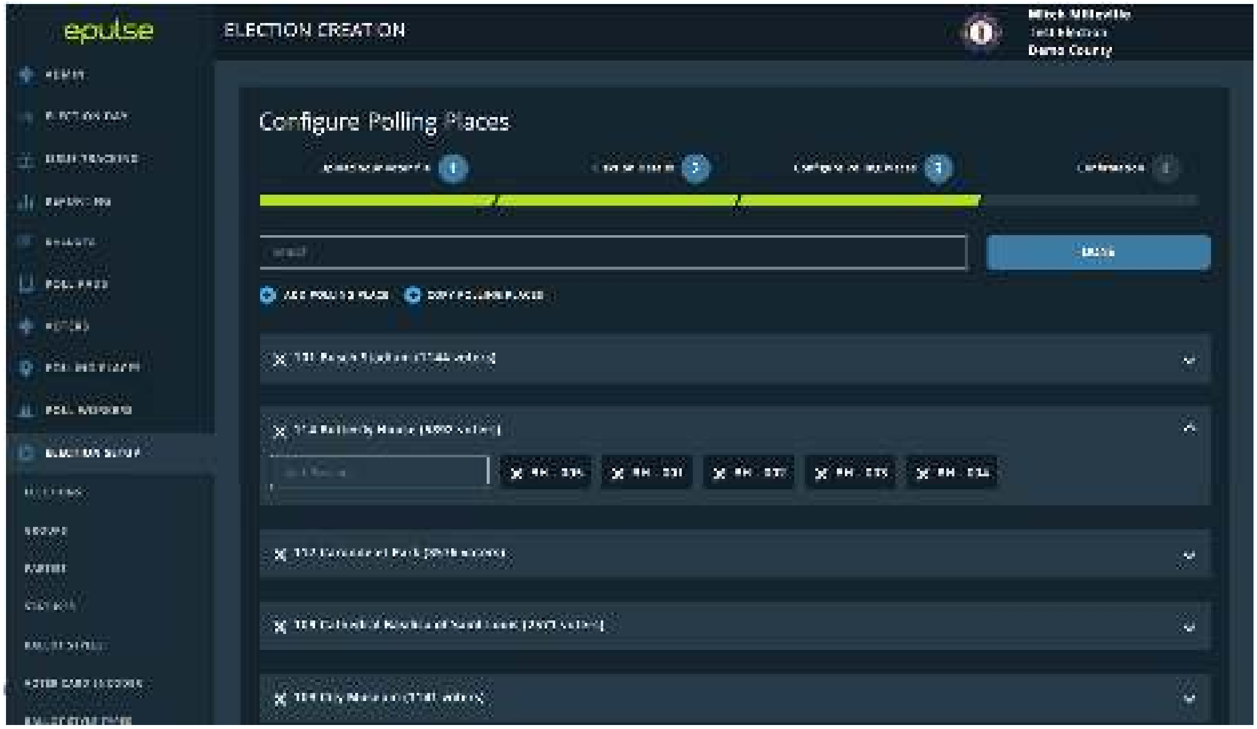
The Poll Pad and ePulse are designed to require minimal development to easily integrate with Georgia's select voting system. Once integration is established, the voter data is imported into ePulse, our election management software, and distributed to the Poll Pads. The following images show the steps to build an election.



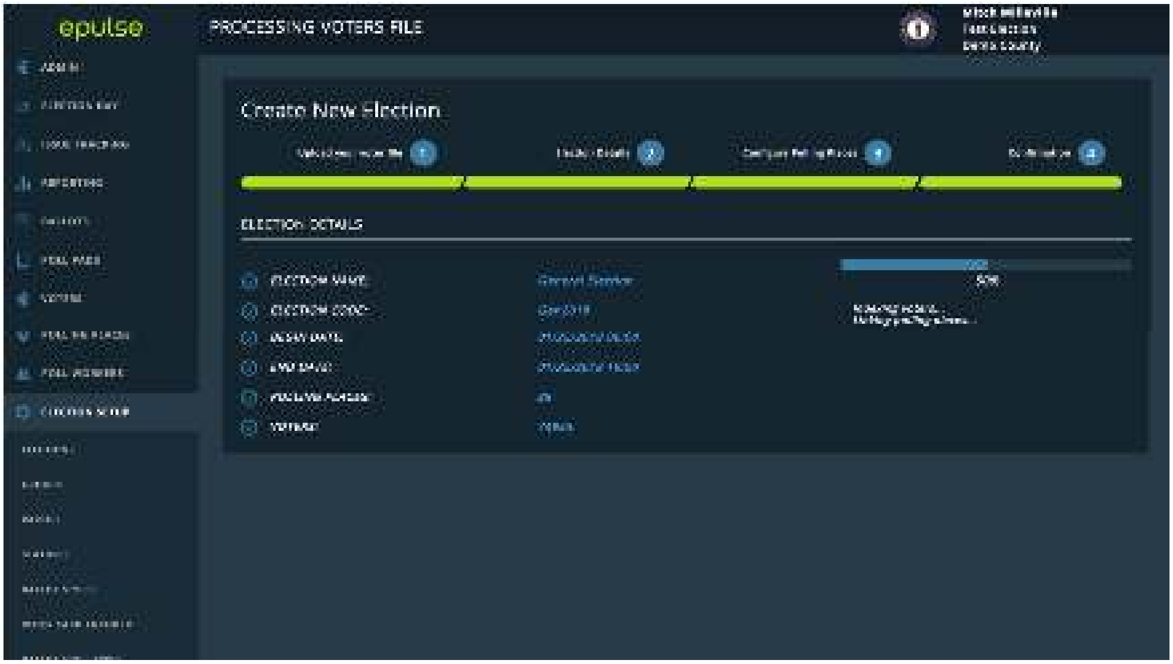




Election Details. The ePulse user enters in the election details, including election type, date, and poll open and closing times. Supplemental changes can be applied in mass via a batch update shortly before Election Day in ePulse. Individual records can be updated in ePulse. If connectivity is available, the application will automatically pull in any relevant supplemental changes once connected to the network. Absent the availability of network connectivity, jurisdictions can deploy an iSync drive or use Poll Pad's barcode scanner to update the appropriate voter status.

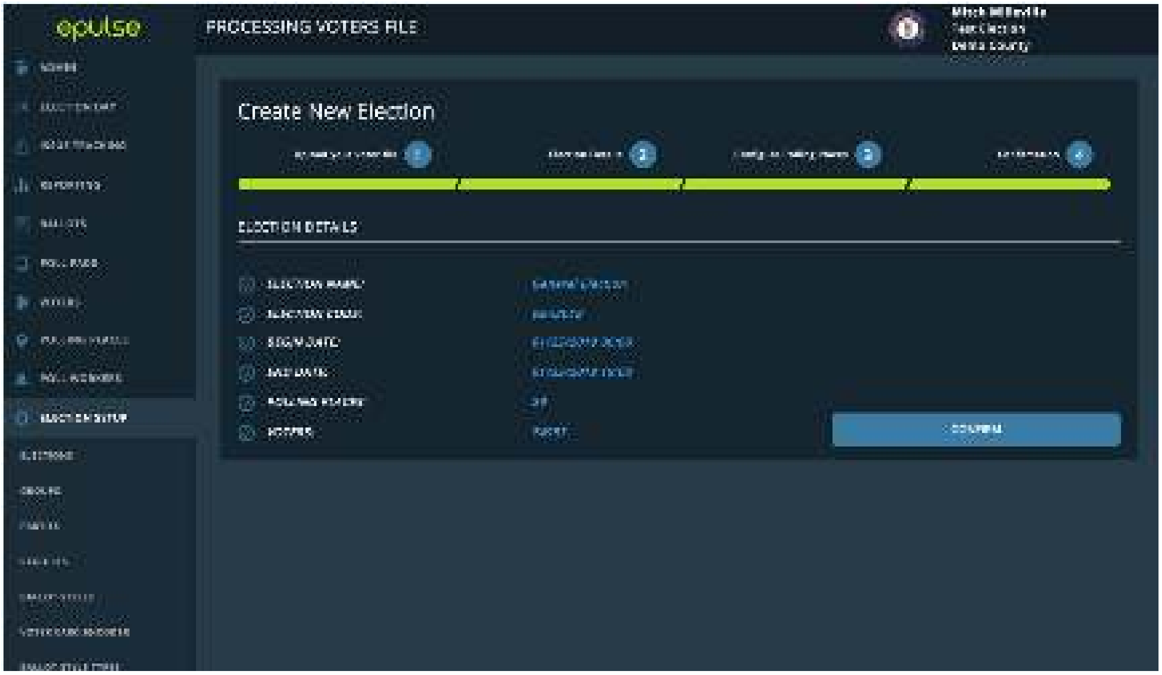


The third step is reviewing the imported list of polling places. The user can customize the configuration for each Polling Place and precinct. Various combinations of polling locations can be manually added or imported in bulk into ePulse for use during an election. Vote centers, early absentee locations, or precinct specific locations are the most common types, but we are also able to work with the State to set up a unique offering at your request.



Final Configuration. ePulse begins indexing the voters and links voter records to the correct polling places. ePulse allows the upload of supplemental data and rosters from the State Voter Registration in accordance with Georgia law. Once loaded, the changes enacted by the supplemental file are then disseminated to the Poll Pad application via wireless hotspot connectivity, or barcode scanning, for near real-time updating of voter records.

Figures D-31 and D-32. Setting up an election in ePulse.



Election Setup Confirmation. The Confirmation page provides a summary report of the new election details. The user reviews; then clicks Confirm.

Reporting with ePulse

ePulse has numerous modules that give each County a complete view to manage elections. The following pages highlight the major Poll Pad features and ePulse modules that come with the Poll Pad solution.

ePulse Module: Reporting

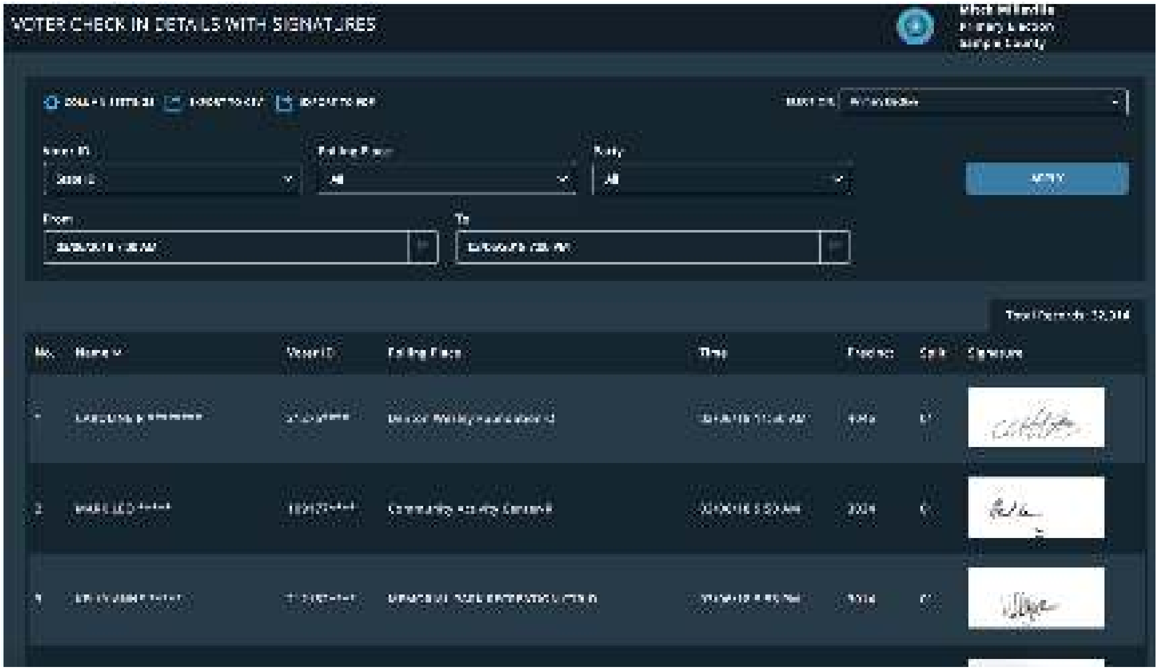
Reports can be run in ePulse at any point during and after the election. Our standard reports are listed below. The State and its jurisdictions can apply filters to customize the standard reports and they may be exported and printed.

- Voter Check-in Details with Signatures
- Suspense/Inactive Voters who Voted
- Voter Turnout by Precinct
- Poll Worker Sign Ins
- Voter Turnout
- Provisional Voter Report
- Canceled Voter Check Ins
- Voter Rolls by Polling Place
- Ballot Styles
- Voter Turnout by Polling Place

ePulse can sort, filter, and search through check-in data in the post-election discovery process, making it easy to hone in on the exact information that is needed at any time.

The Poll Pad system can report on any data collected by the auditing system, including but not limited to: transaction types; transaction times; transactions by poll official; and number of searches per transaction. Transaction types and transaction times are easily viewable on the Election Day dashboard and updated in real time throughout the day with the use of an internet connection.

Sample ePulse reports are provided on the following pages and include both the web browser screenshots and exported reports.

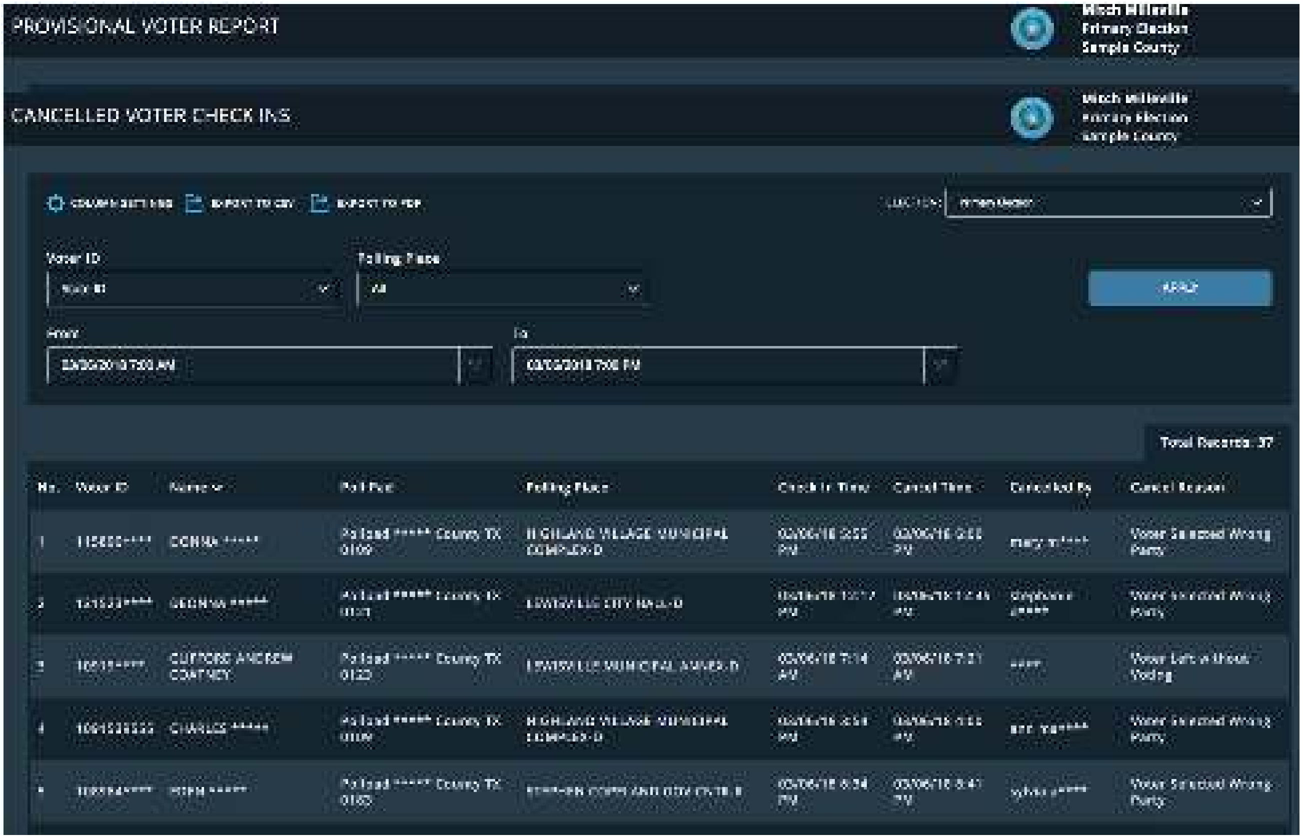


VOTER CHECK IN DETAILS WITH SIGNATURES

Primary Election
Sample County

From: [illegible]
To: [illegible]

No.	Name	Voter ID	Polling Place	Time	Precinct	Split	Signature
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	



PROVISIONAL VOTER REPORT

Mitch Milleville
Primary Election
Sample County

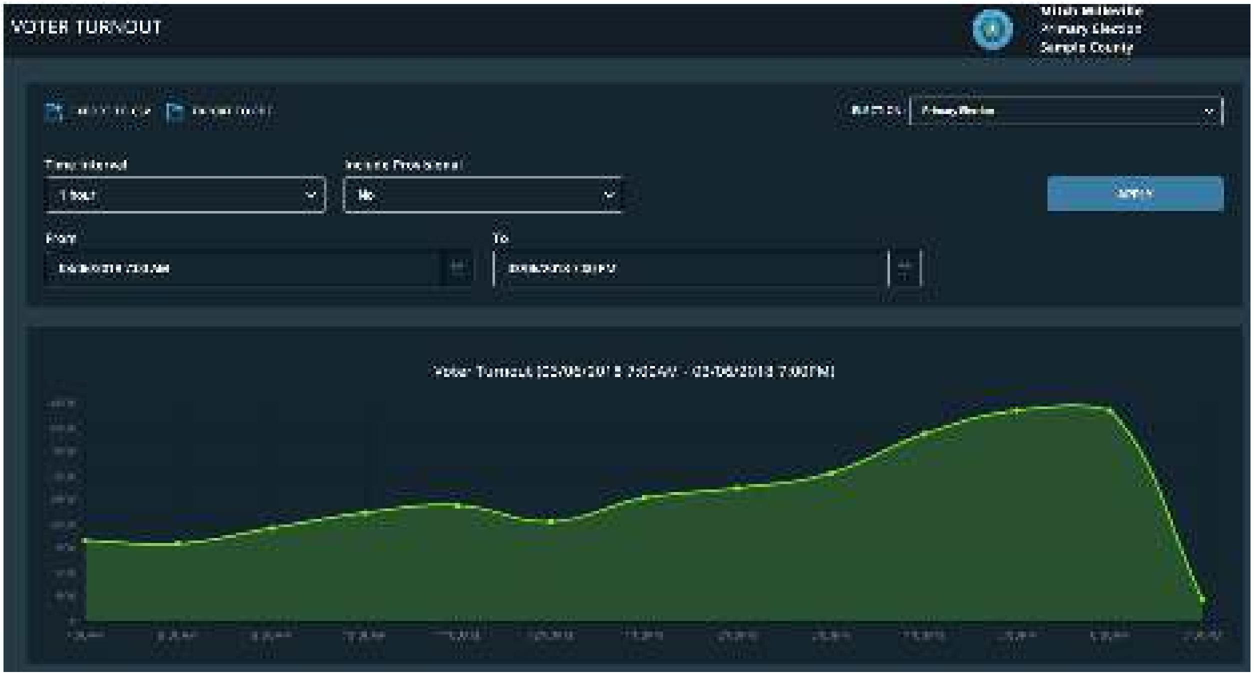
CANCELLED VOTER CHECK INS

Mitch Milleville
Primary Election
Sample County

Election: Primary Election
Voter ID: Voter ID
Polling Place: All
From: 03/06/2018 7:00 AM
To: 03/06/2018 7:00 PM

Total Records: 37

No.	Voter ID	Name	Poll Pad	Polling Place	Check In Time	Cancel Time	Cancelled By	Cancel Reason
1	115800****	DONNA *****	Pollpad ***** County TX 0109	HIGHLAND VILLAGE MUNICIPAL COMPLEX-D	03/06/18 3:55 PM	03/06/18 3:58 PM	mary m****	Voter Selected Wrong Party
2	121523****	GEORGIA *****	Pollpad ***** County TX [illegible]	LEWISVILLE CITY HALL-D	03/06/18 12:17 PM	03/06/18 12:45 PM	stephanie *****	Voter Selected Wrong Party
3	100151****	CLIFFORD ANDREW COATNEY	Pollpad ***** County TX 0123	LEWISVILLE MUNICIPAL ANNEX-D	03/06/18 7:14 AM	03/06/18 7:21 AM	****	Voter Left without Voting
4	[illegible]	CHARLES *****	Pollpad ***** County TX 0109	HIGHLAND VILLAGE MUNICIPAL COMPLEX-D	[illegible] PM	[illegible] PM	[illegible]	Voter Selected Wrong Party
5	100954****	JOHN *****	Pollpad ***** County TX 0103	[illegible]	03/06/18 6:34 PM	03/06/18 6:41 PM	sylvia r****	Voter Selected Wrong Party



VOTER TURNOUT

Primary Election
Sample County

Election: Primary Election

Time Interval: 1 hour

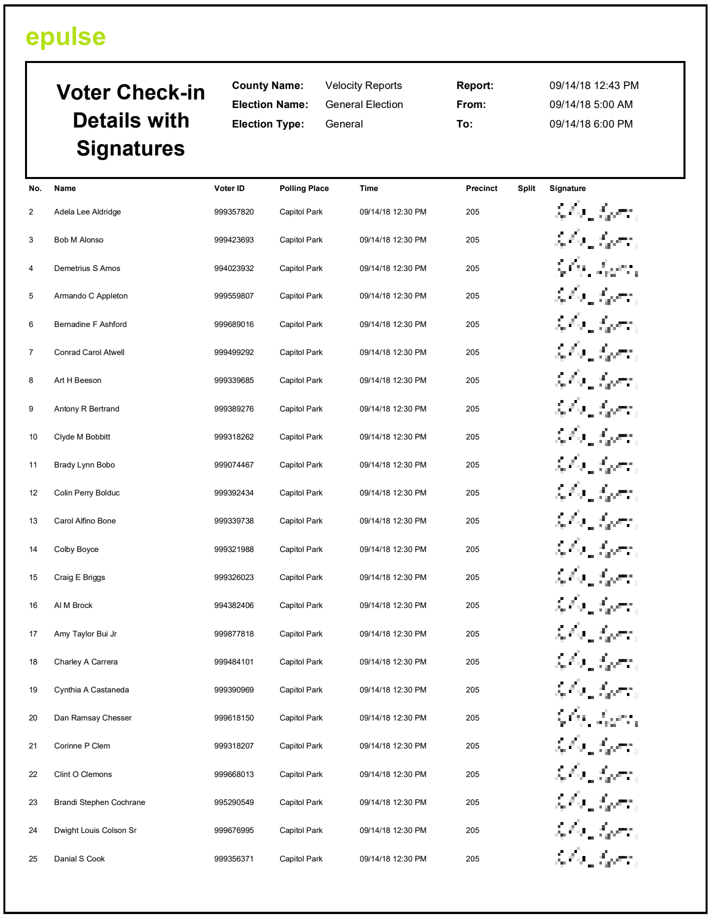
Include Provisional: No

From: [illegible]

To: [illegible]

Voter Turnout [03/06/2018 7:00AM - 03/06/2018 7:00PM]

Sample PDF Report Downloaded from ePulse



epulse

Voter Check-in Details with Signatures

County Name: Velocity Reports
Election Name: General Election
Election Type: General
Report: 09/14/18 12:43 PM
From: 09/14/18 5:00 AM
To: 09/14/18 6:00 PM

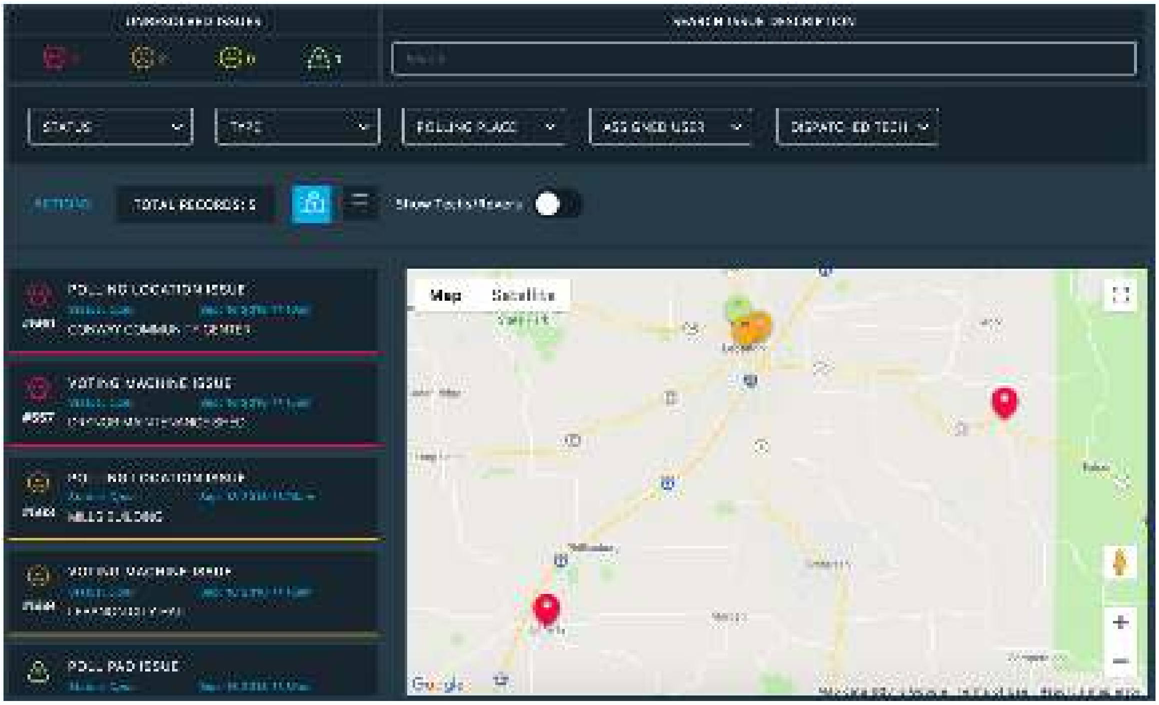
No.	Name	Voter ID	Polling Place	Time	Precinct	Split	Signature
2	Adela Lee Aldridge	999357820	Capitol Park	09/14/18 12:30 PM	205		
3	Bob M Alonso	999423693	Capitol Park	09/14/18 12:30 PM	205		
4	Demetrius S Amos	994023932	Capitol Park	09/14/18 12:30 PM	205		
5	Armando C Appleton	999559807	Capitol Park	09/14/18 12:30 PM	205		
6	Bernadine F Ashford	999689016	Capitol Park	09/14/18 12:30 PM	205		
7	Conrad Carol Atwell	999499292	Capitol Park	09/14/18 12:30 PM	205		
8	Art H Beeson	999339685	Capitol Park	09/14/18 12:30 PM	205		
9	Antony R Bertrand	999389276	Capitol Park	09/14/18 12:30 PM	205		
10	Clyde M Bobbitt	999318262	Capitol Park	09/14/18 12:30 PM	205		
11	Brady Lynn Bobo	999074467	Capitol Park	09/14/18 12:30 PM	205		
12	Colin Perry Bolduc	999392434	Capitol Park	09/14/18 12:30 PM	205		
13	Carol Alfino Bone	999339738	Capitol Park	09/14/18 12:30 PM	205		
14	Colby Boyce	999321988	Capitol Park	09/14/18 12:30 PM	205		
15	Craig E Briggs	999326023	Capitol Park	09/14/18 12:30 PM	205		
16	Al M Brock	994382406	Capitol Park	09/14/18 12:30 PM	205		
17	Amy Taylor Bui Jr	999877818	Capitol Park	09/14/18 12:30 PM	205		
18	Charley A Carrera	999484101	Capitol Park	09/14/18 12:30 PM	205		
19	Cynthia A Castaneda	999390969	Capitol Park	09/14/18 12:30 PM	205		
20	Dan Ramsay Chesser	999618150	Capitol Park	09/14/18 12:30 PM	205		
21	Corinne P Clem	999318207	Capitol Park	09/14/18 12:30 PM	205		
22	Clint O Clemons	999668013	Capitol Park	09/14/18 12:30 PM	205		
23	Brandi Stephen Cochrane	995290549	Capitol Park	09/14/18 12:30 PM	205		
24	Dwight Louis Colson Sr	999676995	Capitol Park	09/14/18 12:30 PM	205		
25	Danial S Cook	999356371	Capitol Park	09/14/18 12:30 PM	205		

If deployed with connectivity, ePulse and Poll Pad can communicate in near real-time during elections. These communications can be usedfor the following modules:

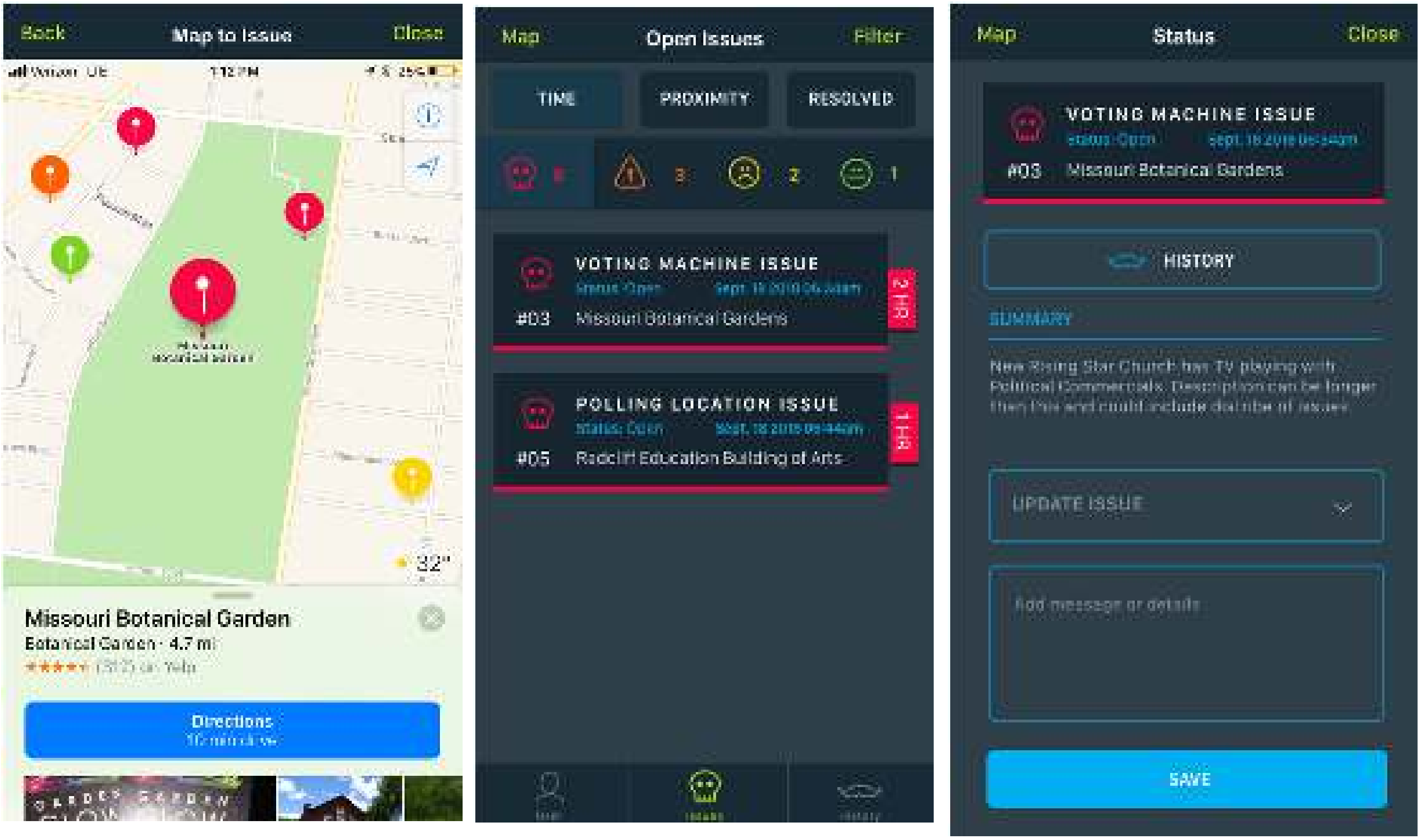
ePulse Module and Mobile Application: iTrack Issue Tracking

ePulse provides a method to assign election incident reports to help desk technicians and track their resolution. iTrack is a module built into ePulse and is divided into incident tracking and incident viewing/reporting. Reporting an incident allows the user to assign incidents to specific technicians, as well as detail what devices were affected by the incident, in which polling location or vote center, and whether the incident is open, pending, or closed. Issue creation, updates, and close are all timestamped, and the user that performed each event is logged in the system. iTrack allows for a method to track technicians and their GPS coordinates via a smartphone application that runs on iOS and Android operating systems.

KNOWiNK provides in-depth training and troubleshooting guides for in-office tech support and on-site personnel. Tech support personnel in the election office access the iTrack Issue Tracking system to log issues, assign them to devices and poll workers, and deploy techs out to the field to resolve incidents on-site. Using iTrack, Tech Support can communicate with poll workers via text messaging and video chat to get a first-hand understanding of what the poll worker is encountering. iTrack is available in ePulse on a web browser and as a mobile application.



iTrack module in ePulse.



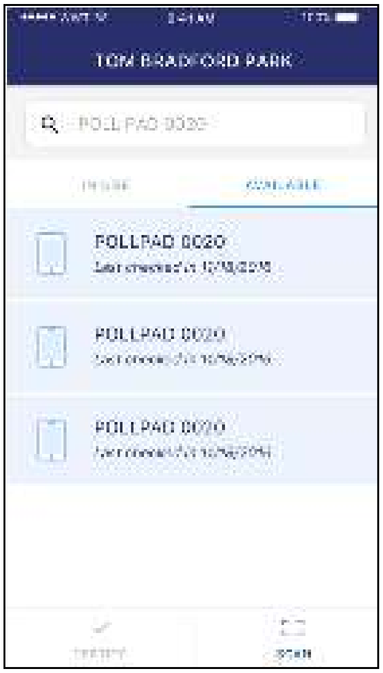
New Rising Star Church has TV playing with Political Commercials. Description can be longer than this and could include details of issues

iTrack Mobile Application Screenshots.

> “The Poll Pad solution and KNOWiNK customer service consistently meet Denton County’s unique needs. ePulse allows us to change a voter from one ballot style to another, a feature we could not do with our previous system. We highly recommend KNOWiNK’s Poll Pad solution.”
>
> – Frank Phillips, Election Administrator, Denton County, Texas

ePulse Module & Mobile Application: iTrack Assets

This tool allows the user to create a comprehensive inventory database of their election-related equipment for assigning and tracking. Users can set up item names, serial numbers, and other pertinent data. Users can assign inventory items to individual polling location destinations.



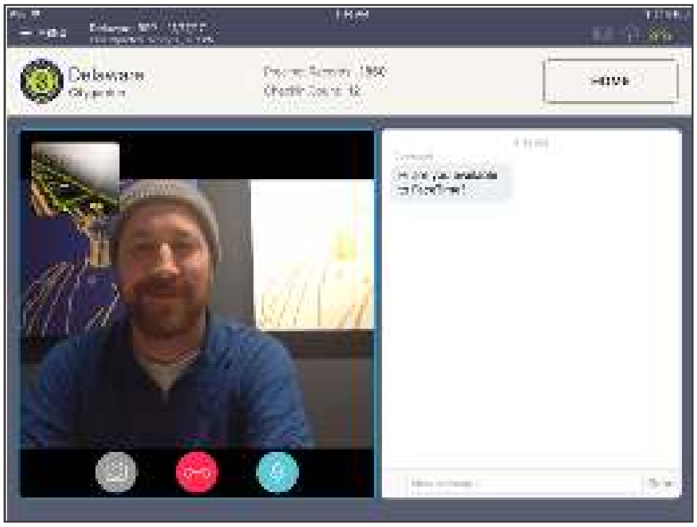
iTrack Assets is also a mobile application that can be used on any iOS device. Using iTrack, tech support can communicate with poll workers via text messaging and video chat to get a first-hand look at what the poll worker is encountering. It uses data from the client's ePulse database. Users can select a polling place from the ePulse database and scan the barcode to check devices into or out of the polling place inventory. This information is communicated in real time, which allows viewers the ability to check on the status of inventory items at each polling place through ePulse. Election officials can set alerts for missing or low inventory, and log device incidents in the iTrack application and ePulse module for expedited issue tracking and resolution.

With iTrack Assets users can

- Scan any barcode
- Track inventory
- Set alerts
- Print labels
- Log incidents

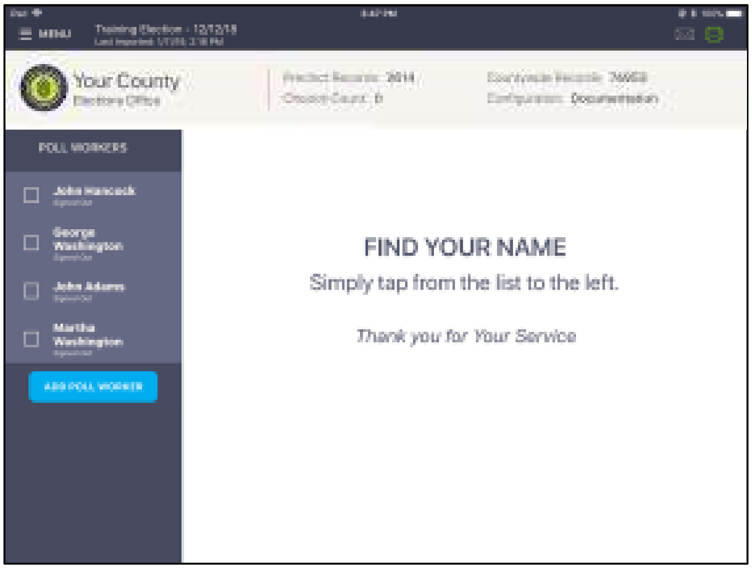
ePulse Module: Video and Text Messaging

ePulse provides election authorities with a powerful and complete communications tool between polling places and the elections office. Customizable and pre-written messages can be sent between the Poll Pads and ePulse to communicate questions and answers. KNOWiNK's innovative video chat is embedded directly into the Poll Pad application and is an election industry first. It revolutionizes how poll workers communicate issues to the election authority by giving them a first-hand look at the polling place.



ePulse Module: Poll Worker Time Tracking

Poll Pad checks in poll workers, logging the timestamp and signature for each event. ePulse allows election officials to assign roles and pay rates to poll workers and provides reports on payroll, attendance and election day performance. Poll worker attendance is automatically managed on the Poll Pad. Using ePulse, election authorities may export a report of poll worker attendance and time for easy reporting and payment.



FIND YOUR NAME

Simply tap from the list to the left.

Thank you for Your Service

- Electronic Poll Books (EPoll)

The Poll Pad® – KNOWiNK's Electronic Poll Book

Poll Pad is a secure electronic voter check-in tool used by election authorities across North America.

The Poll Pad solution provides a seamless electronic voter check-in and verification process for election authorities across North America. Poll Pad is a secure Apple iPad application requiring no appendages for operation.

> "Poll workers and voters **especially appreciated** how easy the Poll Pads are to use…it's really **a wow factor**."

- Process voters in approximately 30 to 45 seconds; mitigate long lines with fast and secure voter look-up.
- Built-in election management and reporting tools; elections can be finalized and submitted within hours of election close.
- Efficiencies translate into reduced polling place staffing; jurisdictions can realize Election Day staffing reductions up to 50%.
- Customizable workflow presents required steps according to each
- jurisdiction's requirements and preferences.
- Improved accuracy and reduced preparation time and storage requirements with the elimination of paper logs.
- Poll workers or voters cannot leave the application without a password, preventing user error, a line slow-down, or creating a
- potential security issue.

> “Poll Pad was a big improvement over the legacy system it replaced in 2016, both in the Primary and General Elections. The District aggressively rolled out new voting equipment and pollbook system concurrently in June. Poll Pad’s intuitive setup and operation, safeguards against error, top tier customer support and user-friendliness for the poll workers were all big contributors to the successful 2016 rollout.“
>
> –District of Columbia Board of Elections

Integration with Voting Systems and Voter Registration Systems

The Poll Pad integrates with voting systems and voter registration systems (VRS), including Dominion’s Image Cast. Our development team continuously incorporates customer feedback to add new features and process improvements.

- Ballot Marking Devices (BMD)

The proposed Ballot Marking Device is the ImageCast X Prime as certified under Democracy Suite 5.5A.

ImageCast Prime X – Ballot Marking Device	
ImageCast X Prime 21" Tablet Specifications	**Ballot Marking Device** **Printer Unit Specs**
Manufacturer: Avalue Model: HID-21V OS: Android 5.1.1. Processor: Intel Celeron J1900 Power: DC 19V input Weight: 19.5 lbs (including battery) Dimensions: H 22" x W 13.5" x D 2.9"	Model: M402dn Power: DC 19V input Weight: 19 lbs Dimensions: 8.5" H x 15" W x 14" D

Battery Backup Life: 2 hour minimum	

Quantity - ImageCast X Prime BMD's is 30,050 as per Attachment O. Dominion is proposing 30,050 Standard ICX Voting Booths.

- Polling Place Scanners (PPS)

The proposed Polling Place Scanner is the ImageCast Precinct as certified under Democracy Suite 5.5A.

ImageCast Precinct
Model number: PCOS-330A 16V AC **OS:** Linux **Processor:** NXP ARM Cortex-A9 Dual Core 1GHz **Memory:** 2GB **Modem:** External Multi-Tech HSPA USB Modem **Weight:** 14 lbs. **Dimensions**: 17" x 13" x 3.5"

ImageCast Precinct Ballot Box
The ImageCast Precinct includes a plastic ballot box to receive cast ballots directly from the ImageCast precinct tabulator. The ballot box contains several key elements such as multiple storage compartments (main, diverted, auxiliary), multiple locks and doors, and access control monitoring. The ImageCast Precinct and attached ballot box are integrated components of the voting system, and it includes security arrangements to prevent unauthorized access to the tabulation component and a locking access door for all ballot locations. The capacity of the ballot box exceeded 1,500 sheets for 11-inch, 14-inch, 17-inch, and 22-inch ballots with 65lb, 80lb, and 100lb paper weights. The overall size of the ballot box with the lid on is 25” (W) by 38” (D) by 44” (H) and the weight is 85 pounds.

Quantity – Dominion is proposing 3,500 ICP Precinct Scanners in accordance to Attachment O. Each scanner comes with a Ballot Box, 3,500 Ballot Boxes.

- Central Scanning Devices (CSD)

The proposed central scanning device is the ImageCast Central as certified under Democracy Suite 5.5A. The ImageCast Central can be paired with two scanners including the high Speed Canon G1130 and, for smaller counties with limited scanning needs, the Canon M160ii.

ImageCast Central
Includes Canon DR-G1130 scanner, Dell OptiPlex 7440 AIO computer, one 8GB flash memory card, one i-Button (black), one i-Button Programmer with USB Adapter, patch cable 25', Lexar LRW400CRBNA reader. Dell OptiPlex 7440 AIO Computer Specs: **Processor**: Intel® Core™ i3-6100 Processor (Dual Core, 3MB, 4T, 3.7GHz, 65W) ... **Operating System:** (Dell recommends Windows 10 Pro.) **Monitor:** 23.8" WLED Full-HD AIO Non-Touch Display.

Memory: 1 4GB2 DDR4 at 2133MHz. ...

Hard Drive: 2.5 inch 500GB 7200rpm Hard Disk Drive

Approximate weight: 15.9 lbs

Approximate Dimensions: 15.5”x22.6”x2.5”

Scanner: Canon Model DR-G1130 Specs

Feeder Capacity: 48 mm stack or 500 sheets of 80 g/m² (20 lb bond)

Scanning Resolution: 150 x 150 dpi, 200 x 200 dpi, 240 x 240 dpi, 300 x 300 dpi, 400 x 400 dpi, 600 x 600 dpi

Scanning Speed: B&W 100 ppm Portrait/130 ppm Landscape

Power: AC 100V (50/60Hz), AC 120V (60Hz), AC220-240V (50/60Hz)

Approximate weight: 50.3 lbs

Approximate dimensions: 18.9”x21.1”x12.4”

Scanner: Canon M160ii

Feeder Capacity: 60 sheets 21 lbs. bond

Scanning Resolution: 150 x 150 dpi, 200 x 200 dpi, 240 x 240 dpi, 300 x 300 dpi, 400 x 400 dpi, 600 x 600 dpi

Scanning Speed: B&W 60 ppm

Power: DC24V 1.0A

Approximate weight: 7 lbs

Approximate dimensions: 11”x 10” x 9”

Quantity – Dominion is proposing 165 ICC Central Scanners. 20 model G1130 and 145 Model M160ii.

- Consumables

Consumable Item	**Dominion Part**	**Model/Specifications**	**Timeline for Replacement**	**Quantities - Barry**
ICP Cleaning Sheet	141-000008	Cleaning sheets	Dispose of sheets after each use and cleaning.	Each County to receive 5 sheets per Device.
ICP Lithium Battery	117-000512	Backup batteries	Four months before recharge. Capacity diminishes after 500 charge cycles.	Batteries have a 5-year life. Year 6 should replace all IC batteries.
ICX Lithium Battery	117-000531	Backup batteries	Four months before recharge. Capacity diminishes after 500 charge cycles.	Batteries have a 5-year life. Year 6 should replace all batteries.
ICP Paper Roll (96 foot)	123-000229	Archival thermal paper roll.	7 year retention with proper storage.	14,000 rolls have been proposed
Ballot Marking Device Printer toner	123-000340	Replacement toner	~Every 3,100 pages	Toner will last for 3,100 images per BMD. Toner should last for 15 to 20 elections.
Ballot Marking Device Paper	144-000018	3rd party paper stock 11”, 14”, 17”, 19”, 22” as applicable	As needed on a per election basis	Based on per election needs

Ballot Box Storage Boxes	125-000074	Cardboard ballot boxes for ballot transportation and storage.	As needed on a per election basis	25 boxes per carton

It is Dominion's policy to keep replacement parts and consumables on hand to meet the needs of our customers.

- Peripherals

The proposed system includes various peripheral items including:

Product	Description	Quantity
Server Kit	Includes PowerEdge R630 rack server, 24 port switch, 24" monitor, keyboard/mouse, patch cable, Cepstral, Avast. 	4
EMS Workstation	Includes Dell T3420, 24" monitor, iButton programmer, high speed media reader, patch cable, smart card reader/writer.	171

Adjudication Workstation	Includes Dell T3420, 24" monitor, SQL Server 2016 CAL, cables, Windows 10 Pro. 	183
Voter Activation Cards	Smart Card to activate voting session on the ImageCast X Prime.	3 per unit

Uninterruptible Power Supply	Backup power supply for precinct locations. 	2,913

Audio Tactile Interface	Accessibility units for ImageCast X includes ATI unit, headphones and connection cord. 	2,754
Hardware and peripherals for electronic poll books		
iPad tablet	The iPad has a touchscreen/keyboard and a shockproof clear case. The iPad has a battery life of approx. 10 hours. Make: Apple | Model: MP2FLL/A	8,000
Encoder/iOS Reader	The Mfi certified lightning port contact card reader connects securely to the iPad lightning port and include a micro USB cable. Make: FEITAN Technologies | Model: iR301	8,000
iSync Drive	KNOWiNK's secure proprietary removable memory device, the iSync flash drives. Make: KNOWINK | Model: iSD-110	2,800*
Stand for iPad	The iPad stand is durable and user friendly. Make: AI Data | Model: i360	8,000
Scanning tray	KNOWINK'S patented scanning trade scans barcodes on voter ID cards or state identification cards. Make: KNOWiNK | Model: ISP103b-KN2-1	8,000

Styluses	Poll workers and voters may use the styluses or their finger for the iPad’s capacitive touch screen. Make: AI Daata | Model: ISP-1010-KNO	16,000
Carrying case	Shockproof weatherproof foam-fitted case. Make: Nanuk | Model: 910	8,000
Thermal printer (optional)	The Star Micronics printer is the original printer used with KNOWiNK’s system. This printer requires AC power. Make: Star Micronics | Model: TSP650ii	(Optional. The printer pairs with one Poll Pad.)

Attachment D – Mandatory Questions

File 0-4 Org Structure

4 Organizational Structure/CVS

List key personnel including personnel that would supervise implementation of the proposed SVS and provide a CV or resume for each person uploaded as "Organizational Structure."

Dominion
Key Personnel

Key personnel that will provide high level implementation and ongoing support will include the following individuals.

Project Role	Dominion Resource	Project Responsibilities
Executive Sponsor/ Program Management	Nicole Nollette, Vice President of Operations	• Championing the project • Obtains needed budget approval • Accepting responsibility for problems escalated by project team and Project Manager • Serves as a strong advocate for the project throughout the organization • Manages day-to-day resources
Account Manager	Barry Herron, Regional Sales Manager/Georgia Account Manager	• Project Vision • Communications Liaison • Project Deliverables Oversight
Project Manager	Jason Frank, Implementation Manager	• Manages overall project • Escalates, when needed, risks or issues that could or do impact team performance, project time line, scope, quality, and/or budget. • Reports project status and progress. • Creates and maintains project task plan, manages scope and change control processes. • Coordinates tasks among all areas of the organization that are involved or impacted by the project.
Implementation Manager	Tim Baumbach, Senior Manager,	• Manages Day to date implementation activities • Manages resource task assignments

	Customer Relations Manager	• Manages contract labor as applicable • Tracking and reporting of project plan activites
Operations Project Manager	Scott Tucker, Customer Relations Manager	• Escalates, when needed, risks or issues that could or do impact team performance, project time line, scope, quality, and/or budget. • Coordinates tasks among all areas of the organization that are involved or impacted by the project. • Long term customer support representative
Infrastructure Specialist	Darren Silverburg Infrastructure Specialist	• Document technical project requirements • Responsible for development / test environments, • Responsible for troubleshooting technical issues • Technical liaison between the customer and project team • Provide technical support to the project team
Training Specialists	Cathi Smothers, Director of Elections Operations Training Mitch Keddrell, Training Specialist	• Participation in customer round table events to assess training needs • Development and customization of training plan • Scheduling • Staffing • Training coordination with internal and external staff
Security Accountability	Chief Security Officer	• Oversight of key security development and implementation
Legislative Accountability	Kay Stimson, Vice President of Government Affairs	• Oversight of legislative forecasting and impact management
Subject Matter Experts (SMEs)	TBD based on post-implementation needs	• Provide professional expertise related to their discipline including development, engineering, products, logistics. • Provide mentorship to end users (customer), Dominion and KNOWiNK • Participate in ongoing meetings • Support system upgrade and installation activity

Biographies

Nicole Nollette – EVP, Operations – Executive Sponsor

Nicole joined Dominion Voting as an Executive Vice President of Operations in June 2016. In this role, she is responsible for the company's system implementations, customer service delivery, and fulfillment. Nicole provides executive oversight to all election implementations including successful projects in Colorado, Michigan, Elections Ontario, and Nevada, among others. Prior to working with Dominion, Nicole served as Vice President of International Game Technology where she led a global team of customer service and implementation specialists, while also leading operational strategic planning activities. Nicole holds a Bachelor of Science degree from the United States Naval Academy as well as a Master of Business Administration from the Massachusetts Institute of Technology.

Barry Herron – Regional Sales Manager – Dealer Manager, Account Manager

As the Regional Sales Manager, Barry is responsible for all Dominion Voting activities within the State of South Carolina. Barry has over 26 years of experience in the elections industry. Barry has studied the process by which jurisdictions deploy voting systems, he understands how counties procure the equipment they need, and the role of the State in elections and voting system implementation. He has expertise in developing election solutions for state and county needs, cultivating partnerships to ensure successful collaboration between the customer and the company.

Jason Frank – Senior Manager, Implementations

Jason served as Implementation Specialist/Project Manager for every new system implementations across numerous counties in Florida – St. Lucie County, Alachua County, Putnam County, Hernando County, and Columbia County – as well as Salem County, New Jersey. He provided support and service for all aspects of the election projects, including technical response and software/hardware implementation, T3 and end user training, RMA management, Election Day support and post-election resolution. In 2005, Jason co-managed Dominion's implementation of voting system hardware that was delivered to Cook County and the City of Chicago, Illinois. More recently, he co-managed the voting system hardware delivery for Puerto Rico in 2016. He continues to support the hardware teams in these jurisdictions.

With over 11 years of experience in the election industry, Jason has provided a range of election support services to jurisdictions across North America and globally. From Product Specialist expertise to implementation management, he has supported projects in California, Colorado, Wisconsin, Nevada, New Jersey, New York, Pennsylvania, New Mexico, Michigan, Ohio, Arizona, Puerto Rico, Mongolia and Canada. Jason has completed the core programs of the Election Center's CERA/CERV Professional Education Program.

Tim Baumbach – Implementation Manager

Tim has over 18 years of experience in the elections industry, starting with Harvard Custom Manufacturing which built the Sequoia Edge I, Edge II and Insight. His works as the senior test technician lead him to support Sequoia's customers in California and Florida during the new installations. In 2002, Tim went to work directly for Sequoia as a product specialist heading up the repair center to support a growing customer base throughout the US. In 2005 he was promoted to Senior Product Specialist to lead the installation process in the city of Chicago and

Cook County, IL. This work included tracking and coordinating deliveries on over 15,000 pieces of equipment. Writing procedures with checkoff sheets then training customers on maintenance procedures, election preparation procedures and post elections procedures. Since then he has lead similar new installations in San Francisco, New York, Nevada, Mongolia, and Michigan.

Prior to working in the election industry Tim served in the Navy as Nuclear Electronics Technician on board the USS Enterprise, South Carolina and Arkansas.

Scott Tucker – Customer Relations Manager

As the Customer Relations Manager, Scott is the primary point of contact for the customer and works closely with the regional operations director in planning, organizing, and managing project teams in order to achieve pre-determined goals.

Scott's election experience started in 2005 working in the state of Ohio for Diebold Elections Systems, Inc. as a Regional Manager and then continued as a National Trainer with the training department. Scott returned to elections with Dominion in 2015 as the Customer Relations Manager for Ohio, Pennsylvania, and Tennessee. Between Scott's elections experience he worked in various roles in the IT industry from Customer Support to IT Management.

Darren Silverburg - Infrastructure Specialist

Darren has gained experience as an Implementation Specialist, through his time supporting new system implementations across various counties in Florida – St. Lucie County, Alachua County, Putnam County, Hernando County, and Columbia County – as well as in Salem County, New Jersey, Chicago, Illinois, and the State of New Mexico. He provided support and service for all aspects of the election projects, including technical response and software/hardware implementation, T3 training, Election Production, Election Day support and post-election resolution. Today, Darren is responsible for Election Production and general support for the many counties currently using Dominion's Democracy Suite system. He has also been closely involved in the certification effort on both software and hardware components, and has extensive knowledge of server installations, and networking and data transmission requirements.

With over 10 years of experience in the election industry, Darren has provided a range of election support services to jurisdictions across North America. He has supported projects in California, Colorado, Nevada, New Jersey, New York, Pennsylvania, New Mexico, Ohio, and Canada.

Cathi Smothers – Training Specialist

Cathi has over 30 years of experience in elections. Cathi served as Deputy Registrar for the Hamilton County, Tennessee Election Commission for nineteen years before joining the original Global Election Systems' team in 2000. Since that time, she has supported many new system implementations and provided a full range of election support for customers in twenty states. Cathi is also classified as a senior technical specialist. Cathi has also been a member of the Project Lead Teams for the Delaware, Georgia, Maryland, Mississippi, and New Mexico statewide voting system installations.

Cathi is currently holds a CERV certification (Certified Elections/Registration Vendor) through the Election Center's CERA/CERV Professional Education Program.

Mitch Keddrell – Training Specialist

Mitch has more than 10 years of election system support and implementation experience that includes assistance with statewide voting systems implementations and working with voting jurisdictions of all sizes across the United States. In his 10 years working with elections, he has managed and executed responsibilities involved with many aspects of voting system implementations and operations.

Chief Security Officer

The Chief Security Officer and his team will be responsible for developing best practices and providing guidance physical and cyber security programs. The program will be based on an in-depth assessment of Georgia's facilities, Dominion's facility and on a county by county basis.

Jeremy Holck, IT and Organizational Security

Jeremy has over 20 years of experience working in IT for midsize and large enterprises and as a managed services provider. Jeremy has led groups providing operational support, build and engineering, product development, and security services. Jeremy has provided support for emergency 911 critical infrastructure services, Cloud Infrastructure as a Service solutions, and on-premise IT. Today, Jeremy is responsible for all aspects of Information Technology and support our Engineering, Operations, and Online systems. In addition, Jeremy leads our Security initiatives which include Cyber defense, User Training, and Physical security.

Kay Stimson, Vice President of Government Affairs

Kay is a seasons government relations and public affairs professional with more than 20 years of experience working with U.S. election officials and media. As Dominion's Vice-President for Government Affairs, she serves as the company's public affairs liaison to federal and state government agencies. She is also the media spokesperson for the company.

Prior to joining the Dominion team, Kay spent 17+ years representing the National Association of Secretaries of State (NASS), the oldest professional association for state government officials in the U.S. In this role, she oversaw communications and programming outreach to 54 state and territorial member offices, 100+ media outlets and multiple federal entities, including the U.S. Election Assistance Commission, Congress and the White House.

Kay has worked on a number of major election initiatives in the U.S., including the creation and passage of the Help America Vote Act of 2002, the initial formation of the U.S. Election Assistance Commission and oversight of government outreach for the 2005 Commission on Federal Election Reform

Kay holds a Bachelor of Arts degree in Communications from Towson University and a Master's degree in Political Communications from the University of Maryland at College Park. She is based in Northern Virginia.

KNOWiNK

[redacted]

[redacted]

[redacted]

[redacted]

Attachment D – Mandatory Questions

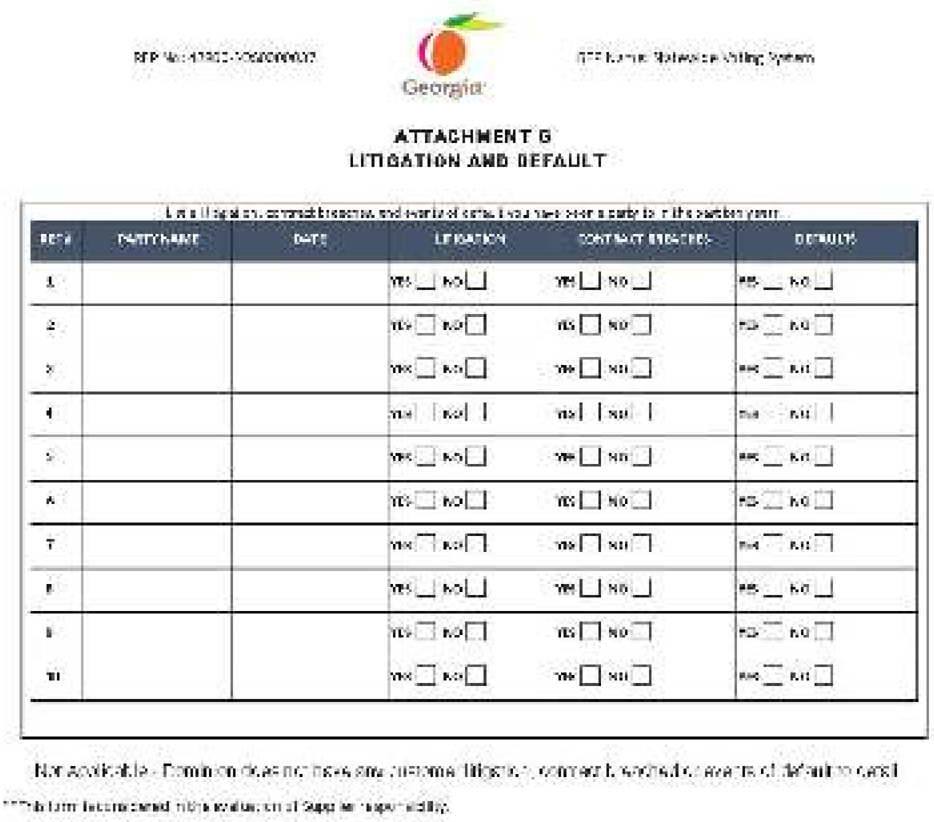
File 0-5 Litigation and Default

5 Litigation and Default

List all litigation, contract breaches, and events of default you have been a party to in the past ten years on the attached form titled "Litigation and Default."

Dominion does not have any customer litigation, contract breached or events of default to detail. Therefore, we have attached the forms below with a note detailing that it is Not Applicable.

We would be happy to provide any additional information upon request.



RFP No: 47800-SOS0000037

RFP Name: Statewide Voting System

ATTACHMENT G
LITIGATION AND DEFAULT

List all litigation, contract breaches, and events of default you have been a party to in the last ten years.

ITEM	PARTY NAME	DATE	LITIGATION	CONTRACT BREACHES	DEFAULTS
1			YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
2			YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
3			YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
4			YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
5			YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
6			YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
7			YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
8			YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
9			YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
10			YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐

Not Applicable - Dominion does not have any customer litigation, contract breaches or events of default to detail

**This form is considered in the evaluation of Supplier responsibility.

Attachment D – Mandatory Questions

File 0-6 Financial Docs

6 Financials

Provide evidence of financial health to include, if available, financial statements, financial institution agreements for inventory and production, balance sheets, profit and loss reports for the past three years, Dun and Bradstreet Business Credit Reports, and PAYDEX Score uploaded as "Financial Documentation."

The following pages include Dominion's Audited Financial Statements for the past three years.

Please note, Dominion's Audited Financial Statements are considered confidential and not for public release or consumption. As such each page includes the following note:

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2017

Dominion Voting Systems Corporation

Consolidated Financial Statements

For the Year Ended December 31, 2017

[redacted]

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[redacted]

See accompanying notes

[redacted]

See accompanying notes 2

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[redacted]

See accompanying notes

[redacted]

4

CONFIDENTIAL & PROPRIETARY • NO PART OF THIS DOCUMENT MAY BE DISCLOSED OR COPIED

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[redacted]

2016

Dominion Voting Systems Corporation

Consolidated Financial Statements

For the Year Ended December 31, 2016

[redacted]

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[redacted]

The accompanying notes are an integral part of these consolidated financial statements. 2

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[redacted]

The accompanying notes are an integral part of these consolidated financial statements. 3

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[redacted]

The accompanying notes are an integral part of these consolidated financial statements.

[redacted]

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2015

Dominion Voting Systems Corporation

Consolidated Financial Statements

For the Year Ended December 31, 2015

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Attachment D – Mandatory Questions

File 0-7 References

7 References

Provide a list of current and past clients that have implemented a similar voting system solution to the proposed SVS on the form titled "References."

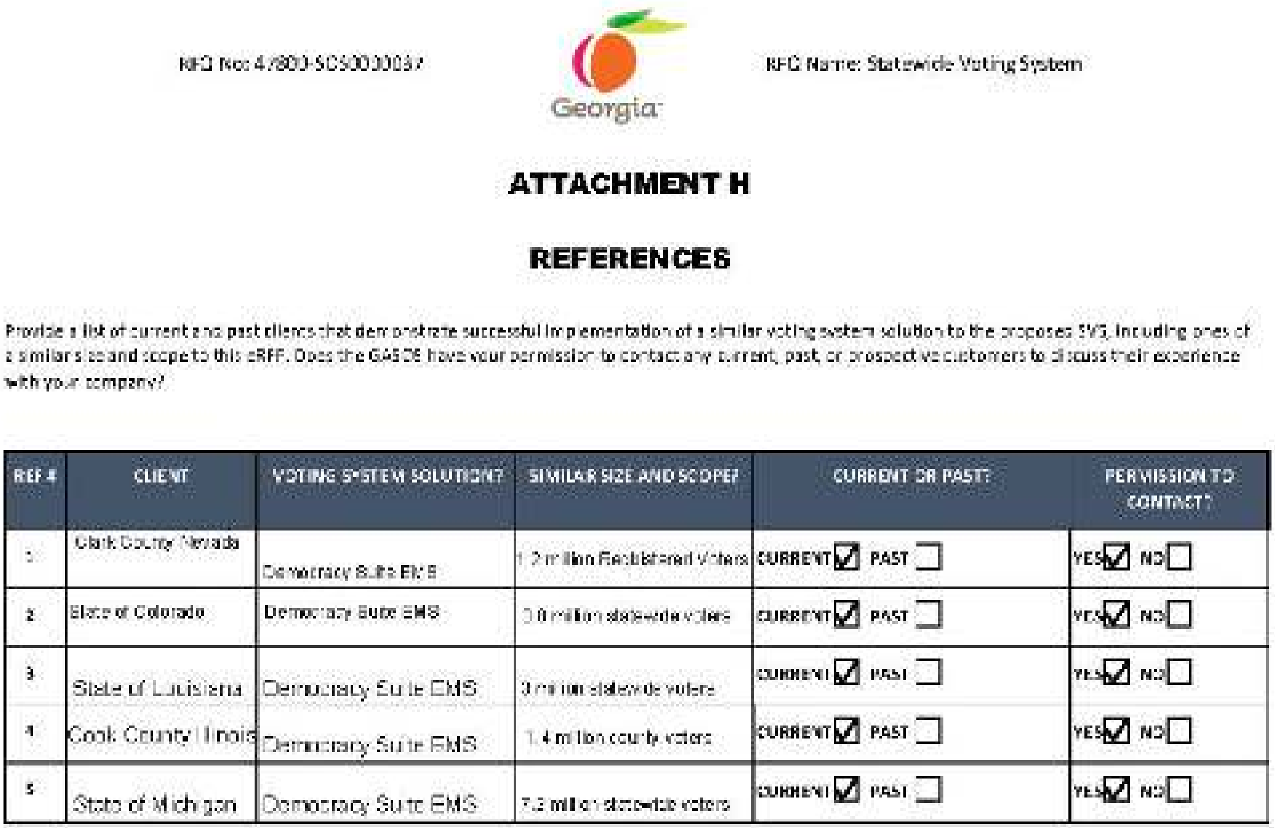
Dominion Voting Systems, Inc. is a company that has distinguished itself by pursuing excellence in customer service by implementing a technical culture focused on achieving the highest levels of accuracy, reliability and transparency in elections since 2003. As an established election provider in the United States, with a diverse customer base of 33 states, out of which jurisdictions in 19 states have successfully implemented our Democracy Suite system. We are providing a snapshot of the reach and diversity of our experience:

- Clark County, Nevada was the first to deploy the ImageCast X with fully accessible Voter Verified Paper Audit Trail (VVPAT).
- Currently supporting a diverse customer base in California of 30 counties, including 21 who have transitioned to Democracy Suite.
- Democracy Suite was chosen as the statewide voting system of choice in Colorado. The State is streamlining their processes with the ImageCast X, ImageCast Central, and Adjudication.
- The State of Michigan ranked Democracy Suite #1 out of 5 major vendors. Over 65 counties will be implementing Democracy Suite in 2017-2018.
- 52 counties in New York have implemented the ImageCast Precinct, the first all-in-one Ballot Marking Device.
- Louisiana experienced greater efficiency after the statewide implementation of the ImageCast Central in 2011.

Throughout all of North America, Dominion maintains a customer base of nearly 3,000 entities, of which, approximately 78 percent, or 2,300 entities, have chosen to install the Democracy Suite EMS.

Due to the number of customers, we have completed Attachment H – References with details for 5 large customers. Additionally, following the completed form, we provide a representative list of current customers for your review.

We would be happy to provide additional information regarding any of our customers upon request.



RFQ No: 47800-SOS0000037

Georgia

RFQ Name: Statewide Voting System

ATTACHMENT H

REFERENCES

Provide a list of current and past clients that demonstrate successful implementation of a similar voting system solution to the proposed SVS, including ones of a similar size and scope to this eRFP. Does the GASOS have your permission to contact any current, past, or prospective customers to discuss their experience with your company?

REF #	CLIENT	VOTING SYSTEM SOLUTION?	SIMILAR SIZE AND SCOPE?	CURRENT OR PAST?	PERMISSION TO CONTACT?
1	Clark County Nevada	Democracy Suite EMS	1.2 million Registered Voters	CURRENT ☑ PAST ☐	YES ☑ NO ☐
2	State of Colorado	Democracy Suite EMS	3.0 million statewide voters	CURRENT ☑ PAST ☐	YES ☑ NO ☐
3	State of Louisiana	Democracy Suite EMS	3 million statewide voters	CURRENT ☑ PAST ☐	YES ☑ NO ☐
4	Cook County Illinois	Democracy Suite EMS	1.4 million county voters	CURRENT ☑ PAST ☐	YES ☑ NO ☐
5	State of Michigan	Democracy Suite EMS	7.3 million statewide voters	CURRENT ☑ PAST ☐	YES ☑ NO ☐

Below is a representative list of election jurisdictions where the Democracy Suite system has been deployed or is scheduled to be deployed, including the key components used (ImageCast Central – ICC, ImageCast Evolution – ICE, ImageCast Precinct – ICP, ImageCast X – ICX, Adjudication – ADJ) and the year of signed business.

The State of Alaska

- City and Borough of Sitka (ICP-A, 2014)
- City of Valdez (ICP, 2015)
- The Municipality of Anchorage (ICX, ICC, ADJ, 2017)
- The City of Bethel (ICP, 2017)
- The City and Borough of Ketchikan (ICP, 2017)

The State of California

- Del Norte County (ICE, ICC, ADJ, 2015)
- Glenn County (ICE, ICC, ADJ, 2016)
- Imperial County (ICE, ICC, ADJ, 2015)
- Kern County (ICC, ADJ, 2015)
- Napa County (ICE, ICC, ADJ 2015/2018) *Voter's Choice Act SB 450 Configuration
- Siskiyou County (ICE, ICC, ADJ, 2015)
- Tehama County (ICE, ICC, ADJ, 2016)
- Mono County (ICC, 2017)
- Monterey County (ICC, 2017)
- San Luis Obispo County (ICX, ICC, ADJ, 2018)
- Sacramento County (ICX, ICC, ADJ, 2018)

- Contra Costa County (ICX, ICC, ADJ, 2018)
- Shasta County (ICE, ICC, ADJ, 2018)
- Inyo County (ICX, ICC, ADJ 2018)
- San Benito County (ICX, ICC, ADJ, 2018)
- Madera County (ICX, ICC, ADJ, 2018)
- Butte County (ICX, ICC, ADJ, 2018)
- Mariposa County (ICX, ICC, ADJ, 2018)
- Sonoma County (ICX, ICC, ADJ, 2018)
- Ventura County (ICX, ICC, ADJ, 2018)

The State of Colorado

- Adams County (ICX, ICC, ADJ, 2016)
- Arapahoe County (ICX, ICC, ADJ, 2016)
- Chaffee County (ICX, ICC, ADJ, 2016)
- Gilpin County (ICX, ICC, ADJ, 2016)
- Gunnison County (ICX, ICC, ADJ, 2016)
- City and County of Denver (ICX, ICC, ADJ, 2016)
- Mesa County (ICX, ICC, ADJ, 2016)
- Moffat County (ICX, ICC, ADJ, 2016)
- Baca County (ICX, ICC, ADJ, 2016)
- Broomfield County (ICX, ICC, ADJ, 2016)
- Clear Creek County (ICX, ICC, ADJ, 2016)
- Eagle County (ICX, ICC, ADJ, 2016)
- Logan County (ICX, ICC, ADJ, 2016)
- Pitkin County (ICX, ICC, ADJ, 2016)

- Teller County (ICX, ICC, ADJ, 2016)
- Park County (ICX, ICC, ADJ, 2016)
- Pueblo County (ICX, ICC, ADJ, 2016)
- Sedgwick County (ICX, ICC, ADJ, 2016)
- Washington County (ICX, ICC, ADJ, 2016)
- Alamosa County (ICX, ICC, ADJ, 2017)
- Archuleta County (ICX, ICC, ADJ, 2017)
- Bent County (ICX, ICC, ADJ, 2017)
- Boulder County (ICX, ICC, ADJ, 2017)
- Conejos County (ICX, ICC, ADJ, 2017)
- Cheyenne County (ICX, ICC, ADJ, 2017)
- Crowley County (ICX, ICC, ADJ, 2017)
- Costilla County (ICX, ICC, ADJ, 2017)
- Delta County (ICX, ICC, ADJ, 2017)
- Dolores County (ICX, ICC, ADJ, 2017)
- Elbert County (ICX, ICC, ADJ, 2017)
- El Paso County (ICX, ICC, ADJ, 2017)
- Fremont County (ICX, ICC, ADJ, 2017)
- Grand County (ICX, ICC, ADJ, 2017)
- Huerfano County (ICX, ICC, ADJ, 2017)
- Jefferson County (ICX, ICC, ADJ, 2017)
- Kiowa County (ICX, ICC, ADJ, 2017)
- Kit Carson County (ICX, ICC, ADJ, 2017)
- Lake County (ICX, ICC, ADJ, 2017)
- La Plata County (ICX, ICC, ADJ, 2017)
- Las Animas County (ICX, ICC, ADJ, 2017)
- Lincoln County (ICX, ICC, ADJ, 2017)

- Otero County (ICX, ICC, ADJ, 2017)
- Ouray County (ICX, ICC, ADJ, 2017)
- Moffat County (ICX, ICC, ADJ, 2017)
- Montezuma County (ICX, ICC, ADJ, 2017)
- Montrose County (ICX, ICC, ADJ, 2018)
- Morgan County (ICX, ICC, ADJ, 2017)
- Phillips County (ICX, ICC, ADJ, 2017)
- Prowers County (ICX, ICC, ADJ, 2017)
- Rio Grande County (ICX, ICC, ADJ, 2017)
- Routt County (ICX, ICC, ADJ, 2017)
- San Miguel County (ICX, ICC, ADJ, 2017)
- Summit County (ICX, ICC, ADJ, 2017)
- Yuma County (ICX, ICC, ADJ, 2017)

The State of Florida

- Alachua County (ICE, ICC, 2015)
- Baker County (ICE, 2013)
- Columbia County (ICE-DD, ICC, 2017)
- Jefferson County (ICE, 2018)
- Hardee County (ICE, 2013)
- Hernando (ICE-DD, ICC, MBP, 2015)
- Leon County (ICE, ICC, 2014)
- Levy County (ICE, 2014)
- Madison County (ICE, 2013)
- Monroe County (ICE, 2013)
- Okeechobee County (ICE, 2016)

- St Lucie County (ICE, ICC, 2014)
- Dixie County (ICE, 2018)
- DeSoto County (ICE, 2018)
- Gilchrist County (ICE-DD, 2018)
- Taylor County (ICE, 2017)

The State of Iowa

- Adair County (ICP-BMD, 2015)
- Appanoose County (ICP-BMD, 2016)
- Bremer County (ICP-BMD, 2016)
- Cedar County (ICP BMD, 2013)
- Hardin County (ICP-BMD, ICC, 2015)
- Lucas County (ICP-BMD, 2016)
- Mitchell County (ICP-BMD, 2015)
- Wayne County (ICP-BMD, 2016)
- Dickinson County (ICP, ICC, 2017)

The State of Kansas

- Lane County (ICP-BMD Audio, 2015)
- Reno County (ICP, ICX, 2017)
- Thomas County (ICP, ICX, ICC, 2017)

The State of Louisiana

- All 64 parishes (ICC, 2011)

The Commonwealth of Massachusetts

(services provided by LHS Associates)

- Agawam (ICP, 2016)
- Amesbury (ICP, 2017)
- Andover (ICP, 2017)
- Ashland (ICP, 2016)
- Athol (ICP, 2017)
- Attleboro (ICP, 2016)
- Auburn (2016)
- Belchertown (ICP, 2017)

- Bellingham (ICP, 2016)
- Beverly (ICP, 2017)
- Blackstone (ICP, 2016)
- Boxford (ICP, 2016)
- Brimfield (ICP, 2016)
- Brockton (ICP, 2016)
- Cheshire (ICP, 2016)
- Clinton (ICP, 2015)
- Cohasset (ICP, 2016)
- Dartmouth (ICP, 2017)
- Dedham (ICP, 2016)
- Dover (ICP, 2017)
- Dracut (ICP, 2017)
- Duxbury (ICP, 2016)
- East Bridgewater (ICP, 2017)
- Eastham (ICP, 2014)
- Easton (ICP, 2016)
- Falmouth (ICP, 2016)
- Fitchburg (ICP, 2015)
- Georgetown (ICP, 2017)
- Granby (ICP, 2016)
- Great Barrington (ICP, 2016)
- Groton (ICP, 2016)
- Holden (ICP, 2017)
- Holliston (ICP, 2016)
- Hudson (ICP, 2014)
- Leominster (ICP, 2015)
- Longmeadow (ICP, 2016)

- Lynnfield (ICP, 2016)
- Manchester-by-the-Sea (ICP, 2017)
- Mansfield (ICP, 2014)
- Methuen (ICP, 2017)
- Middleborough (ICP, 2016)
- Monson (ICP, 2017)
- Needham (ICP, 2015)
- Newbury (ICP, 2015)
- North Andover (ICP, 2017)
- Northfield (ICP, 2016)
- Norton (ICP, 2016)
- Orange (ICP, 2016)
- Pembroke (ICP, 2017)
- Pepperell (ICP, 2017)
- Plainville (ICP, 2014)
- Plymouth (ICP, 2017)
- Quincy (ICP, 2016)
- Reading (ICP, 2016)
- Rockport (ICP, 2015)
- Rutland (ICP, 2017)
- Sherborn (ICP, 2014)
- Shirley (ICP, 2015)
- South Hadley (ICP, 2015)
- Southborough (ICP, 2017)
- Uxbridge (ICP, 2016)
- Wales (ICP, 2016)
- Walpole (ICP, 2016)
- Wareham (ICP, 2016)
- Wellesley (ICP, 2016)
- Wenham (ICP, 2016)
- West Boylston (ICP, 2016)
- Westminster (ICP, 2016)
- Weston (ICP, 2015)
- Westwood (ICP, 2016)
- Winchendon (ICP, 2016)
- Winchester (ICP, 2016)
- Winthrop (ICP, 2017)

The State of Michigan

- Alger County (ICP, ICX-BMD, 2017)
- Allegan County (ICP, ICX-BMD, 2018)
- Antrim County (ICP, ICX-BMD, 2018)
- Baraga County (ICP, ICX-BMD, 2018)
- Barry County (ICP, ICX-BMD, 2018)
- Benzie County (ICP, ICX-BMD, 2018)
- Berrien County (ICP, ICX-BMD, 2017)
- Branch County (ICP, ICX-BMD, 2017)
- Calhoun County (ICP, ICX-BMD, 2017)
- Cass County (ICP, ICX-BMD, 2017)
- Charlevoix County (ICP, ICX-BMD, 2017)
- Chippewa County (ICP, ICX-BMD, 2018)
- Clare County (ICP, ICX-BMD, 2017)
- Crawford County (ICP, ICX-BMD, 2018)
- Delta (ICP, ICX-BMD, 2017)
- Dickinson County (ICP, ICX-BMD, 2018)
- Gladwin County (ICP, ICX-BMD, 2017)
- Gogebic County (ICP, ICX-BMD, 2018)
- Gratiot County (ICP, ICX-BMD, 2017)
- Houghton County (ICP, ICX-BMD, 2017)
- Huron County (ICP, ICX-BMD, 2017)
- Ingham County (ICP, ICX-BMD, 2017)
- Iosco County (ICP, ICX-BMD, 2017)
- Iron County (ICP, ICX-BMD, 2018)

- Isabella County (ICP, ICX-BMD, 2017)
- Jackson County (ICP, ICX-BMD, 2017)
- Kalkaska County (ICP, ICX-BMD, 2017)
- Kent County (ICP, ICX-BMD, 2017)
- Keweenaw County (ICP, ICX-BMD, 2018)
- Lake County (ICP, ICX-BMD, 2018)
- Lapeer County (ICP, ICX-BMD, 2017)
- Leelanau County (ICP, ICX-BMD, 2018)
- Lenawee County (ICP, ICX-BMD, 2017)
- Luce County (ICP, ICX-BMD, 2017)
- Mackinac County (ICP, ICX-BMD, 2017)
- Manistee County (ICP, ICX-BMD, 2017)
- Marquette County (ICP, ICX-BMD, 2017)
- Mescota County (ICP, ICX-BMD, 2017)
- Menominee County (ICP, ICX-BMD, 2017)
- Midland County (ICP, ICX-BMD, 2018)
- Missaukee County (ICP, ICX-BMD, 2017)
- Monroe County (ICP, ICX-BMD, 2017)
- Montmorency (ICP, ICX-BMD, 2018)
- Newaygo County (ICP, ICX-BMD, 2017)
- Oceana County (ICP, ICX-BMD, 2018)
- Ogemaw County (ICP, ICX-BMD, 2018)
- Ontonagon County (ICP, ICX-BMD, 2018)
- Osceola County (ICP, ICX-BMD, 2018)
- Oscoda County (ICP, ICX-BMD, 2018)

- Otsego (ICP, ICX-BMD, 2017)
- Presque Isle (ICP, ICX-BMD, 2018)
- Saginaw County (ICP, ICX-BMD, 2018)
- Sanilac County (ICP, ICX-BMD, 2017)
- Schoolcraft County (ICP, ICX-BMD, 2017)
- Shiawassee County (ICP, ICX-BMD, 2017)
- St. Clair County (ICP, ICX-BMD, 2017)
- St. Joseph County (ICP, ICX-BMD, 2017)
- Tuscola County (ICP, ICX-BMD, 2017)
- Van Buren County (ICP, ICX-BMD, 2017)
- Wayne County (ICP, ICX-BMD, 2017)
- Wexford County (ICP, ICX-BMD, 2018)

The State of Minnesota

- Dakota County (ICE, ICC, 2015)
- Scott County (ICE, ICC, 2015)
- Sherburne County (ICE, ICC, 2016)

The State of Missouri

- Adair County (ICP-BMD, 2015)
- Callaway County (ICP-BMD, 2015)
- Carroll County (ICP-BMD, 2015)
- Crawford County (ICP-BMD, 2015)
- Gasconade County (ICP-BMD, 2015)
- Grundy County (ICP-BMD, 2015)
- Harrison County (ICP-BMD, 2016)
- Jasper County (ICP-BMD, 2015)
- Livingston County (ICP- BMD, 2015)
- Lafayette County (ICP-BMD, 2015)
- Maries County (ICP-BMD, 2015)

- Mercer County (ICP-BMD, 2015)
- McDonald County (ICP-BMD, 2014)
- Montgomery County (ICP-BMD, 2016)
- Newton County (ICP-BMD, 2015)
- Nodaway County (ICP-BMD, 2015)
- Osage County (ICP-BMD, 2015)
- Pike County (ICP- BMD, 2015)
- Saline County (ICP-BMD, 2015)
- Warren County (ICP-BMD, 2014)
- Butler County (ICP-BMD, 2017)

The State of Nevada

- Churchill County (ICX with VVPAT, ICC, ADJ, 2018)
- Clark County (ICX with VVPAT, ICC, ADJ, 2017)
- Douglas County (ICX with VVPAT, ICC, ADJ, 2018)
- Elko County (ICX with VVPAT, ICC, ADJ, 2018)
- Esmerelda County (ICX with VVPAT, ICC, ADJ, 2018)
- Eureka County (ICX with VVPAT, ICC, ADJ, 2018)
- Humboldt County (ICX with VVPAT, ICC, ADJ, 2018)
- Lander County (ICX with VVPAT, ICC, ADJ, 2018)
- Lincoln County (ICX with VVPAT, ICC, ADJ, 2018)
- Lyon County (ICX with VVPAT, ICC, ADJ, 2018)
- Mineral County (ICX with VVPAT, ICC, ADJ, 2018)
- Nye County (ICX with VVPAT, ICC, ADJ, 2018)
- Pershing County (ICX with VVPAT, ICC, ADJ, 2018)
- Story County (ICX with VVPAT, ICC, ADJ, 2018)
- Washoe County (ICX with VVPAT, ICC, ADJ, 2017)
- White Pine County (ICX with VVPAT, ICC, ADJ, 2018)

The State of New Jersey

- Burlington County (ICC, 2014)
- Camden County (ICC, 2013)
- Cape May County (ICC, 2013)
- Cumberland County (ICC, 2015)
- Essex County (ICC, 2013)
- Gloucester County (ICC, 2015)

- Hudson County (ICC, 2013)
- Hunterdon County (ICC, 2015)
- Mercer County (ICC 2013)
- Monmouth County (ICC, 2014)
- Morris County (ICC, 2015)
- Passaic County (ICC, 2015)
- Salem County (ICC, 2015)
- Union County (ICC, 2013)

All 33 counties in the State of New Mexico

(ICC, ICE, ICP-BMD, ICP, 2014)

52 Counties in the State of New York

(all except Albany, Erie, Nassau, Rockland, Schenectady and the five boroughs of New York City) (ICP, ICP-BMDICC, 2008)

The State of Ohio

- Belmont County (ICP-A, ICC, 2015)
- Guernsey County (ICE, ICC, 2013)
- Harrison County (ICP, ICE, ICC, 2014)
- Huron County (ICC, ICE, ICP-A, MBP, 2015)
- Muskingum County (ICP, ICE, ICC, ADJ, 2017)

The State of Tennessee

- Hamilton County (ICE, ICP-A, ICC, 2013)

The Commonwealth of Virginia

- Amelia County (ICE, 2016)
- Bedford County (ICE, 2015)
- Buchanan County (ICE, 2015)
- Craig County (ICE, 2015)

- Caroline County (ICP-BMD, 2015)
- Dickenson County (ICE, 215)
- Franklin County (ICE, 2015)
- King George County (ICP-BMD, 2014)
- Lee County (ICE, 2015)
- Buena Vista City (ICE, 2017)
- Sussex County (ICE, 2017)
- Smyth County (ICE, 2017)
- Greensville County (ICE, 2017)
- Louisa County (ICE, 2015)
- Mecklenburg County (ICE, 2015)
- Nottoway County (ICE, 2015)
- Page County (ICP- BMD, 2016)
- Radford City (ICE, 2016)
- Russell County (ICE, 2015)
- Salem City (ICE, 2016)
- Suffolk City (ICE, 2015)
- Waynesboro City (ICE, 2016)

The State of Washington

- Franklin County (ICX, ICC, AADJ, 2017)

The State of Wisconsin

- Door County (ICE, 2015)
- Fond du Lac County (ICE, 2016)
- Green County (ICE, 2015)
- Ozaukee County (ICE, 2016)
- Vilas County (ICE, 2016)

- Washington County (ICE, 2016)
- Winnebago County (ICE, 2015)

The Commonwealth of Puerto Rico

(ICP, 2016)

Section 1 – Background and Financial Capability

File 1-1 Org Structure

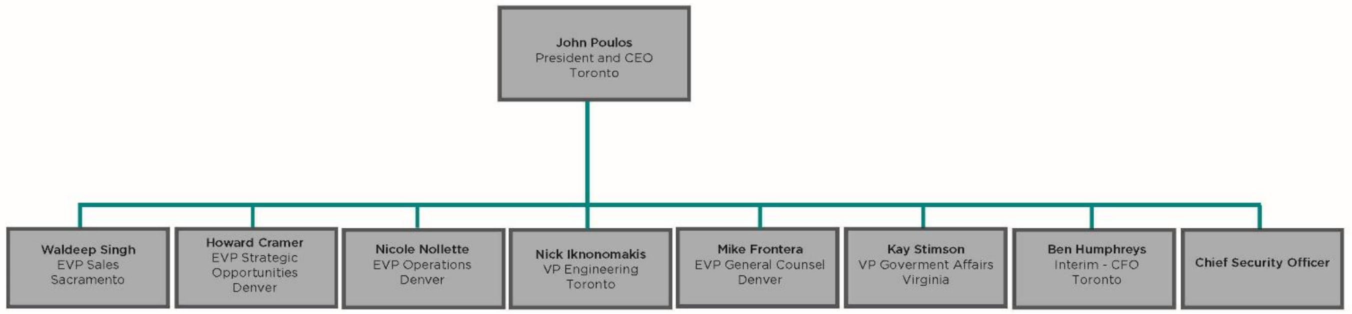
1.1 Describe the history of your business and organizational structure. Describe the organization and ownership structure to include parent companies, divisions, subsidiaries, headquarters, and regional offices. List key personnel including personnel that would supervise implementation of the proposed SVS and provide a CV or resume for each person uploaded as "Organizational Structure."

Dominion Voting

Dominion is a company that has distinguished itself while pursuing excellence in customer service by implementing a technical culture focused on achieving the highest levels of accuracy, reliability and transparency. In 2010, Dominion deepened its roots as a leading company in the elections industry with the acquisition of assets from both Premier Voting Solutions and Sequoia Voting Systems. Today, Dominion's human resource pool of more than 240 employees, consisting of seasoned election veterans and engineering experts has well over 2,000 years of combined elections experience conducting accurate and successful elections with our customers.

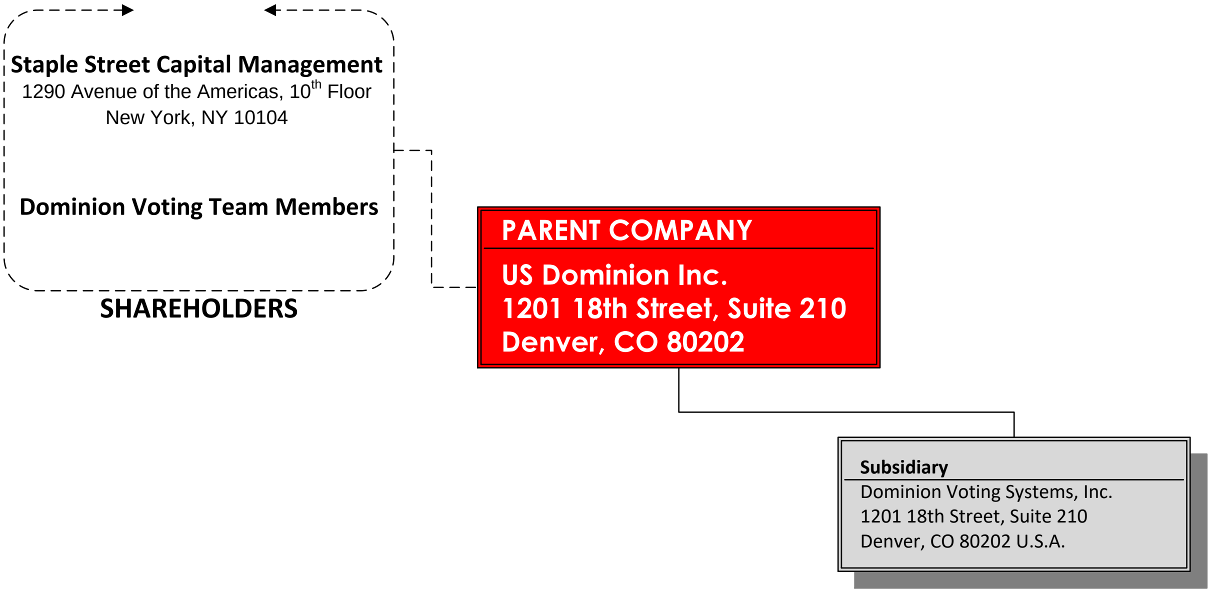
Dominion is headquartered in Denver, CO, with office locations in Toronto, ON, Jamestown and Endicott, NY, McKinney, TX, and San Leandro, CA. Dominion is strategically positioned in all 4 U.S. continental time zones to support its customer base of over 3,000 jurisdictions. Dominion is one of the largest and most trusted providers of elections technology solutions in the United States and the world. As an example, during the U.S. Presidential Elections in November 2016, roughly 35% of registered American voters cast their ballots using our equipment.

Below we provide the Executive-level organizational chart for Dominion:



Dominion Voting Systems, Inc. is a corporation and is wholly owned subsidiary of US Dominion, Inc., which is incorporated under the laws of the State of Delaware, USA. Dominion Voting System, Inc. does not have any subsidiaries.

On July 13, 2018 Dominion Voting was acquired by US Dominion, Inc. US Dominion, Inc.'s ownership is comprised of Staple Street Capital Management L.P. ("SSC"), which owns a controlling interest, as well as the Dominion Voting Systems, Inc. management team. SSC is a U.S.-based limited partnership organized under the laws of the State of Delaware. SSC's primary office location is 1290 Avenue of the Americas, 10th Floor, New York, New York 10104.


Staple Street Capital Management
1290 Avenue of the Americas, 10th Floor
New York, NY 10104
Dominion Voting Team Members
SHAREHOLDERS
PARENT COMPANY
US Dominion Inc.
1201 18th Street, Suite 210
Denver, CO 80202
Subsidiary
Dominion Voting Systems, Inc.
1201 18th Street, Suite 210
Denver, CO 80202 U.S.A.

Key personnel that will provide high level implementation and ongoing support will include the following individuals.

Project Role	Dominion Resource	Project Responsibilities
Executive Sponsor/ Program Management	Nicole Nollette, Vice President of Operations	• Championing the project • Obtains needed budget approval • Accepting responsibility for problems escalated by project team and Project Manager • Serves as a strong advocate for the project throughout the organization • Manages day-to-day resources
Account Manager	Barry Herron, Regional Sales Manager/Georgia Account Manager	• Project Vision • Communications Liaison • Project Deliverables Oversight

Project Manager	Jason Frank, Implementation Manager	• Manages overall project • Escalates, when needed, risks or issues that could or do impact team performance, project time line, scope, quality, and/or budget. • Reports project status and progress. • Creates and maintains project task plan, manages scope and change control processes. • Coordinates tasks among all areas of the organization that are involved or impacted by the project.
Implementation Manager	Tim Baumbach, Senior Manager, Customer Relations Manager	• Manages Day to date implementation activities • Manages resource task assignments • Manages contract labor as applicable • Tracking and reporting of project plan activites
Operations Project Manager	Scott Tucker, Customer Relations Manager	• Escalates, when needed, risks or issues that could or do impact team performance, project time line, scope, quality, and/or budget. • Coordinates tasks among all areas of the organization that are involved or impacted by the project. • Long term customer support representative
Infrastructure Specialist	Darren Silverburg Infrastructure Specialist	• Document technical project requirements • Responsible for development / test environments, • Responsible for troubleshooting technical issues • Technical liaison between the customer and project team • Provide technical support to the project team
Training Specialists	Cathi Smothers, Director of Elections Operations Training Mitch Keddrell, Training Specialist	• Participation in customer round table events to assess training needs • Development and customization of training plan • Scheduling • Staffing • Training coordination with internal and external staff
Security Accountability	Matt Horace, Chief Security Officer	• Oversight of key security development and implementation

Legislative Accountability	Kay Stimson, Vice President of Government Affairs	- Oversight of legislative forecasting and impact management
Subject Matter Experts (SMEs)	TBD based on post-implementation needs	- Provide professional expertise related to their discipline including development, engineering, products, logistics. - Provide mentorship to end users (customer), Dominion and KNOWiNK - Participate in ongoing meetings - Support system upgrade and installation activity

KNOWiNK

About KNOWiNK

KNOWiNK is a sole-proprietorship headquartered in St. Louis, Missouri with regional sales offices in California and Canada.

We have a warehouse and full-time staff dedicated to configuring, kitting and shipping your devices. Our headquarters in St. Louis includes a large warehouse facility to configure, kit and ship your Poll Pads. Our warehouse manager and his team have deployed over 35,000 units across 23 states and Washington, D.C.

Commercial-off-the-shelf hardware for affordable and easy to access products

The iPad, carrying case, printers and printer paper are all commercial-off-the-shelf (COTS) hardware. This allows the State to quickly receive their Poll Pad kits while keeping the price low.

Experienced election administrators, trainers and IT professionals

The Poll Pad solution is supported by a dedicated team of former election administrators. The 10 former election administrators on our team boast over 120 years of combined election administration experience. Our team offers the benefit of a vendor with experience on both the government side and vendor side, allowing us to understand client perspectives, goals and needs while communicating, implementing and supporting the project plan effectively.

Unquestionably secure application

Jurisdictions enjoy peace of mind and cost savings from not having to take on the responsibility of testing the security of the Poll Pad solution. Last year, the State of California reviewed the entire line-by-line code of the Poll Pad application, found it secure, and certified the Poll Pad for use in California elections. United States jurisdictions are also benefiting from our relationship with Elections Canada; specifically, that the Communications Security Establishment, the Canadian equivalent of the U.S. National Security Administration, has gone through every line of code for the application and determined that it is functional and secure.

KNOWiNK's Organization

The State can be confident in KNOWiNK's capacity and capability to meet its EPoll requirements. Our 46-person team is comprised of former election authority leadership, application developers, and regional customer support leads to ensure every detail of the project plan and all client requests are promptly addressed. Our team and Election Coordinator are available 24/7 during active elections to support the State, ensuring the Poll Pad solution functions optimally at all times.

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- City of St. Louis, Missouri
- Franklin County, Ohio
- King County, Washington

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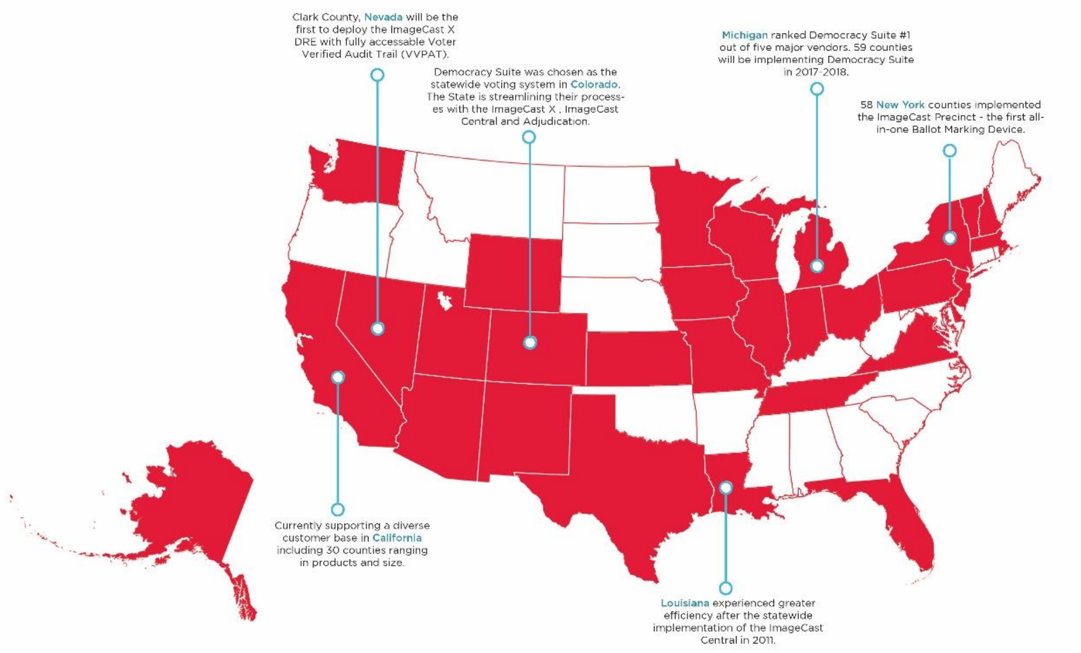
Section 1 – Background and Financial Capability

File 1-2 SVS Experience

1.2 Describe your prior experience providing a similar solution to the proposed SVS and include how long you have offered this type of solution. Explain why the system is proposed as a solution for Georgia.

Dominion Voting Systems, Inc. is a company that has distinguished itself by pursuing excellence in customer service by implementing a technical culture focused on achieving the highest levels of accuracy, reliability and transparency in elections since 2003. As an established election provider in the United States, with a diverse customer base of 33 states, out of which jurisdictions in 19 states have successfully implemented our Democracy Suite system. We are providing a snapshot of the reach and diversity of our experience:

- Clark County, Nevada was the first to deploy the ImageCast X with fully accessible Voter Verified Paper Audit Trail (VVPAT).
- Currently supporting a diverse customer base in California of 30 counties, including 12 who have transitioned to Democracy Suite.
- Democracy Suite was chosen as the statewide voting system of choice in Colorado. The State is streamlining their processes with the ImageCast X, ImageCast Central, and Adjudication.
- The State of Michigan ranked Democracy Suite #1 out of 5 major vendors. Over 65 counties will be implementing Democracy Suite in 2017-2018.
- 52 counties in New York have implemented the ImageCast Precinct, the first all-in-one Ballot Marking Device.
- Louisiana experienced greater efficiency after the statewide implementation of the ImageCast Central in 2011.



Clark County, Nevada will be the first to deploy the ImageCast X DRE with fully accessable Voter Verified Audit Trail (VVPAT).

Democracy Suite was chosen as the statewide voting system in Colorado. The State is streamlining their processes with the ImageCast X , ImageCast Central and Adjudication.

Michigan ranked Democracy Suite #1 out of five major vendors. 59 counties will be implementing Democracy Suite in 2017-2018.

58 New York counties implemented the ImageCast Precinct - the first all-in-one Ballot Marking Device.

Currently supporting a diverse customer base in California including 30 counties ranging in products and size.

Louisiana experienced greater efficiency after the statewide implementation of the ImageCast Central in 2011.

Why Democracy Suite is the clear choice for the State of Georgia

Dominion Voting is the second largest voting system manufacturer in the industry today. The growth is due to strategic acquisitions of election companies in the past decade and the winning of major contracts for the implementation of voting technology in the last 5 to 7 years. Winning has been a result of superior technology products and an extremely high commitment to customer service.

Dominion's staff is composed mainly of seasoned election professionals – senior executives of former election companies, seasoned ex-election administrators from all across the country, extremely talented developers, and experienced support personnel.

Our combination of passionate individuals fully thrive on meeting modern election industry challenges, and strive to improve the products and services to meet evolving customer needs in today's high-tech world wrought with cyber-security challenges,

No other election company possesses this passion for, and commitment to, the future as does Dominion.

Dominion fully stands by our intuitive product line deployed in some of the largest jurisdictions across the country, our industry commitment through constant development and certification efforts, our focus on customer service and satisfaction, and our unique understanding of Georgia's needs for the implementation, as gained through direct experience of some of our employees that were in charge of the deployment of the State’s current voting system. We boldly stand by our claim that Dominion is the clear choice to lead Georgia’s Statewide Voting System deployment in 2019 to make Georgia the new standard for a modern, accountable and secure voting system for years to come.

KNOWiNK

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Section 1 – Background and Financial Capability

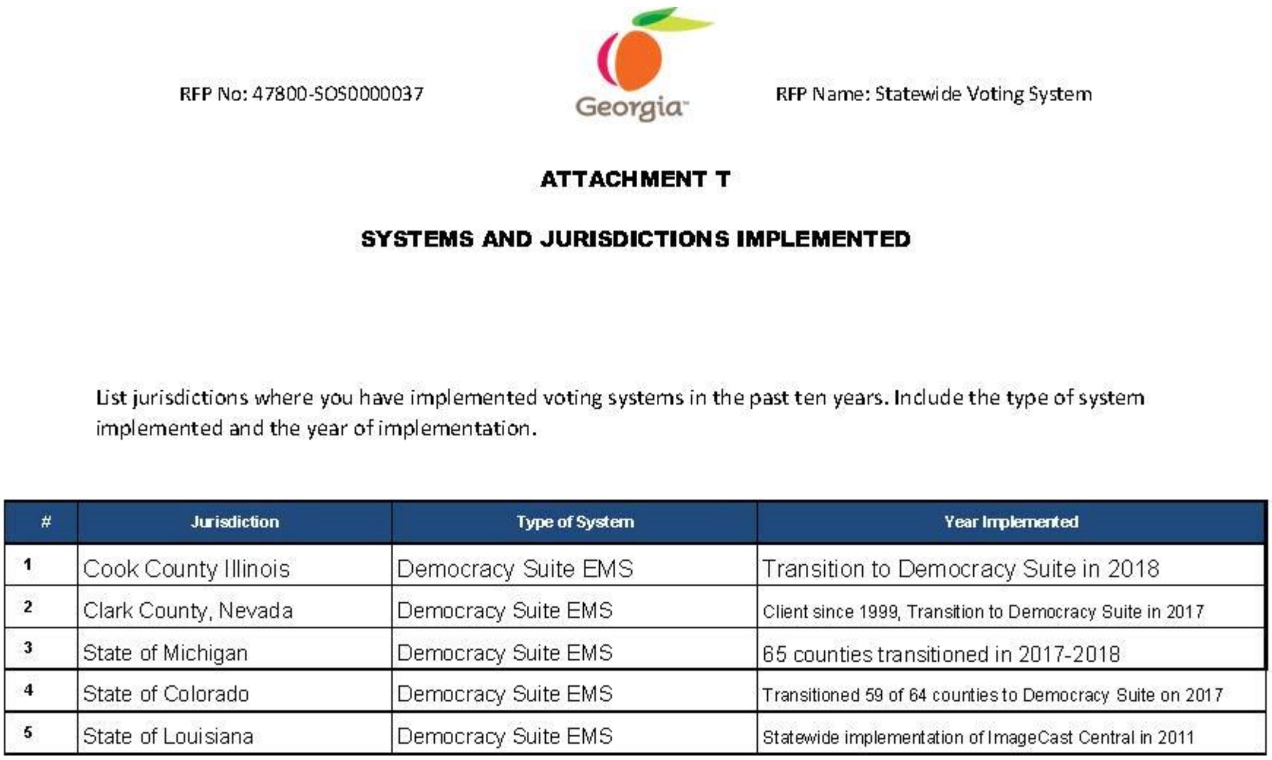
File 1-3 Implementations

1.3 Complete the attached form titled “Systems and Jurisdictions Implemented" to list jurisdictions where you have implemented a similar solution to the proposed SVS. Include the name, size and type of jurisdiction, the year of implementation, type of system implemented, and other details to explain the applicability of the comparison with Georgia.

Dominion Voting

Below we provide a list of 5 jurisdictions that have implemented Democracy Suite on Attachment T – Systems and Jurisdictions. Due to the number of clients currently utilizing Democracy Suite across the United States, we are unable to complete Attachment T for all of our customers. Therefore, on the pages following Attachment T, we provide a representative list of customers for your review.

We would be happy to provide additional information regarding any of our customers upon request.



RFP No: 47800-SOS0000037 Georgia RFP Name: Statewide Voting System

ATTACHMENT T

SYSTEMS AND JURISDICTIONS IMPLEMENTED

List jurisdictions where you have implemented voting systems in the past ten years. Include the type of system implemented and the year of implementation.

#	Jurisdiction	Type of System	Year Implemented
1	Cook County Illinois	Democracy Suite EMS	Transition to Democracy Suite in 2018
2	Clark County, Nevada	Democracy Suite EMS	Client since 1999, Transition to Democracy Suite in 2017
3	State of Michigan	Democracy Suite EMS	65 counties transitioned in 2017-2018
4	State of Colorado	Democracy Suite EMS	Transitioned 59 of 64 counties to Democracy Suite on 2017
5	State of Louisiana	Democracy Suite EMS	Statewide implementation of ImageCast Central in 2011

Below is a representative list of election jurisdictions where the Democracy Suite system has been deployed or is scheduled to be deployed, including the key components used (ImageCast Central – ICC, ImageCast Evolution – ICE, ImageCast Precinct – ICP, ImageCast X – ICX, Adjudication – ADJ) and the year of signed business.

The State of Alaska

- City and Borough of Sitka (ICP-A, 2014)
- City of Valdez (ICP, 2015)
- The Municipality of Anchorage (ICX, ICC, ADJ, 2017)
- The City of Bethel (ICP, 2017)
- The City and Borough of Ketchikan (ICP, 2017)

The State of California

- Del Norte County (ICE, ICC, ADJ, 2015)
- Glenn County (ICE, ICC, ADJ, 2016)
- Imperial County (ICE, ICC, ADJ, 2015)
- Kern County (ICC, ADJ, 2015)
- Napa County (ICE, ICC, ADJ 2015/2018) *Voter's Choice Act SB 450 Configuration
- Siskiyou County (ICE, ICC, ADJ, 2015)
- Tehama County (ICE, ICC, ADJ, 2016)
- Mono County (ICC, 2017)
- Monterey County (ICC, 2017)
- San Luis Obispo County (ICX, ICC, ADJ, 2018)
- Sacramento County (ICX, ICC, ADJ, 2018)
- Contra Costa County (ICX, ICC, ADJ, 2018)
- Shasta County (ICE, ICC, ADJ, 2018)
- Inyo County (ICX, ICC, ADJ 2018)
- San Benito County (ICX, ICC, ADJ, 2018)
- Madera County (ICX, ICC, ADJ, 2018)
- Butte County (ICX, ICC, ADJ, 2018)
- Mariposa County (ICX, ICC, ADJ, 2018)
- Sonoma County (ICX, ICC, ADJ, 2018)
- Ventura County (ICX, ICC, ADJ, 2018)

The State of Colorado

- Adams County (ICX, ICC, ADJ, 2016)
- Arapahoe County (ICX, ICC, ADJ, 2016)
- Chaffee County (ICX, ICC, ADJ, 2016)
- Gilpin County (ICX, ICC, ADJ, 2016)
- Gunnison County (ICX, ICC, ADJ, 2016)
- City and County of Denver (ICX, ICC, ADJ, 2016)
- Mesa County (ICX, ICC, ADJ, 2016)
- Moffat County (ICX, ICC, ADJ, 2016)
- Baca County (ICX, ICC, ADJ, 2016)
- Broomfield County (ICX, ICC, ADJ, 2016)
- Clear Creek County (ICX, ICC, ADJ, 2016)

- Eagle County (ICX, ICC, ADJ, 2016)
- Logan County (ICX, ICC, ADJ, 2016)
- Pitkin County (ICX, ICC, ADJ, 2016)
- Teller County (ICX, ICC, ADJ, 2016)
- Park County (ICX, ICC, ADJ, 2016)
- Pueblo County (ICX, ICC, ADJ, 2016)
- Sedgwick County (ICX, ICC, ADJ, 2016)
- Washington County (ICX, ICC, ADJ, 2016)
- Alamosa County (ICX, ICC, ADJ, 2017)
- Archuleta County (ICX, ICC, ADJ, 2017)
- Bent County (ICX, ICC, ADJ, 2017)
- Boulder County (ICX, ICC, ADJ, 2017)
- Conejos County (ICX, ICC, ADJ, 2017)
- Cheyenne County (ICX, ICC, ADJ, 2017)
- Crowley County (ICX, ICC, ADJ, 2017)
- Costilla County (ICX, ICC, ADJ, 2017)
- Delta County (ICX, ICC, ADJ, 2017)
- Dolores County (ICX, ICC, ADJ, 2017)
- Elbert County (ICX, ICC, ADJ, 2017)
- El Paso County (ICX, ICC, ADJ, 2017)
- Fremont County (ICX, ICC, ADJ, 2017)
- Grand County (ICX, ICC, ADJ, 2017)
- Huerfano County (ICX, ICC, ADJ, 2017)
- Jefferson County (ICX, ICC, ADJ, 2017)
- Kiowa County (ICX, ICC, ADJ, 2017)
- Kit Carson County (ICX, ICC, ADJ, 2017)
- Lake County (ICX, ICC, ADJ, 2017)
- La Plata County (ICX, ICC, ADJ, 2017)
- Las Animas County (ICX, ICC, ADJ, 2017)
- Lincoln County (ICX, ICC, ADJ, 2017)
- Otero County (ICX, ICC, ADJ, 2017)
- Ouray County (ICX, ICC, ADJ, 2017)
- Moffat County (ICX, ICC, ADJ, 2017)
- Montezuma County (ICX, ICC, ADJ, 2017)
- Montrose County (ICX, ICC, ADJ, 2018)
- Morgan County (ICX, ICC, ADJ, 2017)
- Phillips County (ICX, ICC, ADJ, 2017)
- Prowers County (ICX, ICC, ADJ, 2017)
- Rio Grande County (ICX, ICC, ADJ, 2017)
- Routt County (ICX, ICC, ADJ, 2017)
- San Miguel County (ICX, ICC, ADJ, 2017)
- Summit County (ICX, ICC, ADJ, 2017)
- Yuma County (ICX, ICC, ADJ,

2017)

The State of Florida

- Alachua County (ICE, ICC, 2015)
- Baker County (ICE, 2013)
- Columbia County (ICE-DD, ICC, 2017)
- Jefferson County (ICE, 2018)
- Hardee County (ICE, 2013)
- Hernando (ICE-DD, ICC, MBP, 2015)
- Leon County (ICE, ICC, 2014)
- Levy County (ICE, 2014)
- Madison County (ICE, 2013)
- Monroe County (ICE, 2013)
- Okeechobee County (ICE, 2016)
- St Lucie County (ICE, ICC, 2014)
- Dixie County (ICE, 2018)
- DeSoto County (ICE, 2018)
- Gilchrist County (ICE-DD, 2018)
- Taylor County (ICE, 2017)

The State of Iowa

- Adair County (ICP-BMD, 2015)
- Appanoose County (ICP-BMD, 2016)
- Bremer County (ICP-BMD, 2016)
- Cedar County (ICP BMD, 2013)
- Hardin County (ICP-BMD, ICC, 2015)
- Lucas County (ICP-BMD, 2016)
- Mitchell County (ICP-BMD, 2015)
- Wayne County (ICP-BMD, 2016)
- Dickinson County (ICP, ICC, 2017)

The State of Kansas

- Lane County (ICP-BMD Audio, 2015)
- Reno County (ICP, ICX, 2017)
- Thomas County (ICP, ICX, ICC, 2017)

The State of Louisiana

- All 64 parishes (ICC, 2011)

The Commonwealth of Massachusetts

(services provided by LHS Associates)

- Agawam (ICP, 2016)
- Amesbury (ICP, 2017)
- Andover (ICP, 2017)
- Ashland (ICP, 2016)
- Athol (ICP, 2017)
- Attleboro (ICP, 2016)
- Auburn (2016)
- Belchertown (ICP, 2017)
- Bellingham (ICP, 2016)
- Beverly (ICP, 2017)
- Blackstone (ICP, 2016)
- Boxford (ICP, 2016)
- Brimfield (ICP, 2016)
- Brockton (ICP, 2016)
- Cheshire (ICP, 2016)
- Clinton (ICP, 2015)
- Cohasset (ICP, 2016)
- Dartmouth (ICP, 2017)
- Dedham (ICP, 2016)
- Dover (ICP, 2017)
- Dracut (ICP, 2017)
- Duxbury (ICP, 2016)
- East Bridgewater (ICP, 2017)
- Eastham (ICP, 2014)
- Easton (ICP, 2016)
- Falmouth (ICP, 2016)
- Fitchburg (ICP, 2015)
- Georgetown (ICP, 2017)
- Granby (ICP, 2016)
- Great Barrington (ICP, 2016)

- Groton (ICP, 2016)
- Holden (ICP, 2017)
- Holliston (ICP, 2016)
- Hudson (ICP, 2014)
- Leominster (ICP, 2015)
- Longmeadow (ICP, 2016)
- Lynnfield (ICP, 2016)
- Manchester-by-the-Sea (ICP, 2017)
- Mansfield (ICP, 2014)
- Methuen (ICP, 2017)
- Middleborough (ICP, 2016)
- Monson (ICP, 2017)
- Needham (ICP, 2015)
- Newbury (ICP, 2015)
- North Andover (ICP, 2017)
- Northfield (ICP, 2016)
- Norton (ICP, 2016)
- Orange (ICP, 2016)
- Pembroke (ICP, 2017)
- Pepperell (ICP, 2017)
- Plainville (ICP, 2014)
- Plymouth (ICP, 2017)
- Quincy (ICP, 2016)
- Reading (ICP, 2016)
- Rockport (ICP, 2015)
- Rutland (ICP, 2017)
- Sherborn (ICP, 2014)
- Shirley (ICP, 2015)
- South Hadley (ICP, 2015)
- Southborough (ICP, 2017)
- Uxbridge (ICP, 2016)
- Wales (ICP, 2016)
- Walpole (ICP, 2016)
- Wareham (ICP, 2016)
- Wellesley (ICP, 2016)
- Wenham (ICP, 2016)
- West Boylston (ICP, 2016)
- Westminster (ICP, 2016)
- Weston (ICP, 2015)
- Westwood (ICP, 2016)
- Winchendon (ICP, 2016)
- Winchester (ICP, 2016)
- Winthrop (ICP, 2017)

The State of Michigan

- Alger County (ICP, ICX-BMD, 2017)
- Allegan County (ICP, ICX-BMD, 2018)
- Antrim County (ICP, ICX-BMD, 2018)
- Baraga County (ICP, ICX-BMD, 2018)
- Barry County (ICP, ICX-BMD, 2018)
- Benzie County (ICP, ICX-BMD, 2018)
- Berrien County (ICP, ICX-BMD, 2017)
- Branch County (ICP, ICX-BMD, 2017)
- Calhoun County (ICP, ICX-BMD, 2017)
- Cass County (ICP, ICX-BMD, 2017)
- Charlevoix County (ICP, ICX-BMD, 2017)
- Chippewa County (ICP, ICX-BMD, 2018)
- Clare County (ICP, ICX-BMD, 2017)
- Crawford County (ICP, ICX-BMD, 2018)
- Delta (ICP, ICX-BMD, 2017)
- Dickinson County (ICP, ICX-BMD, 2018)
- Gladwin County (ICP, ICX-BMD, 2017)
- Gogebic County (ICP, ICX-BMD, 2018)
- Gratiot County (ICP, ICX-BMD, 2017)

- Houghton County (ICP, ICX-BMD, 2017)
- Huron County (ICP, ICX-BMD, 2017)
- Ingham County (ICP, ICX-BMD, 2017)
- Iosco County (ICP, ICX-BMD, 2017)
- Iron County (ICP, ICX-BMD, 2018)
- Isabella County (ICP, ICX-BMD, 2017)
- Jackson County (ICP, ICX-BMD, 2017)
- Kalkaska County (ICP, ICX-BMD, 2017)
- Kent County (ICP, ICX-BMD, 2017)
- Keweenaw County (ICP, ICX-BMD, 2018)
- Lake County (ICP, ICX-BMD, 2018)
- Lapeer County (ICP, ICX-BMD, 2017)
- Leelanau County (ICP, ICX-BMD, 2018)
- Lenawee County (ICP, ICX-BMD, 2017)
- Luce County (ICP, ICX-BMD, 2017)
- Mackinac County (ICP, ICX-BMD, 2017)
- Manistee County (ICP, ICX-BMD, 2017)
- Marquette County (ICP, ICX-BMD, 2017)
- Mescota County (ICP, ICX-BMD, 2017)
- Menominee County (ICP, ICX-BMD, 2017)
- Midland County (ICP, ICX-BMD, 2018)
- Missaukee County (ICP, ICX-BMD, 2017)
- Monroe County (ICP, ICX-BMD, 2017)
- Montmorency (ICP, ICX-BMD, 2018)
- Newaygo County (ICP, ICX-BMD, 2017)
- Oceana County (ICP, ICX-BMD, 2018)
- Ogemaw County (ICP, ICX-BMD, 2018)
- Ontonagon County (ICP, ICX-BMD, 2018)
- Osceola County (ICP, ICX-BMD, 2018)
- Oscoda County (ICP, ICX-BMD, 2018)
- Otsego (ICP, ICX-BMD, 2017)
- Presque Isle (ICP, ICX-BMD, 2018)
- Saginaw County (ICP, ICX-BMD, 2018)
- Sanilac County (ICP, ICX-BMD, 2017)
- Schoolcraft County (ICP, ICX-BMD, 2017)
- Shiawassee County (ICP, ICX-BMD, 2017)
- St. Clair County (ICP, ICX-BMD, 2017)
- St. Joseph County (ICP, ICX-BMD, 2017)
- Tuscola County (ICP, ICX-BMD, 2017)
- Van Buren County (ICP, ICX-BMD, 2017)
- Wayne County (ICP, ICX-BMD, 2017)
- Wexford County (ICP, ICX-BMD, 2018)

The State of Minnesota

- Dakota County (ICE, ICC, 2015)
- Scott County (ICE, ICC, 2015)
- Sherburne County (ICE, ICC, 2016)

The State of Missouri

- Adair County (ICP-BMD, 2015)
- Callaway County (ICP-BMD, 2015)
- Carroll County (ICP-BMD, 2015)
- Crawford County (ICP-BMD, 2015)
- Gasconade County (ICP-BMD, 2015)
- Grundy County (ICP-BMD, 2015)
- Harrison County (ICP-BMD, 2016)
- Jasper County (ICP-BMD, 2015)
- Livingston County (ICP- BMD, 2015)
- Lafayette County (ICP-BMD, 2015)
- Maries County (ICP-BMD, 2015)
- Mercer County (ICP-BMD, 2015)
- McDonald County (ICP-BMD, 2014)
- Montgomery County (ICP-BMD, 2016)
- Newton County (ICP-BMD, 2015)
- Nodaway County (ICP-BMD, 2015)
- Osage County (ICP-BMD, 2015)
- Pike County (ICP- BMD, 2015)
- Saline County (ICP-BMD, 2015)
- Warren County (ICP-BMD, 2014)
- Butler County (ICP-BMD, 2017)

The State of Nevada

- Churchill County (ICX with VVPAT, ICC, ADJ, 2018)
- Clark County (ICX with VVPAT, ICC, ADJ, 2017)
- Douglas County (ICX with VVPAT, ICC, ADJ, 2018)
- Elko County (ICX with VVPAT, ICC, ADJ, 2018)
- Esmerelda County (ICX with VVPAT, ICC, ADJ, 2018)
- Eureka County (ICX with VVPAT, ICC, ADJ, 2018)
- Humboldt County (ICX with VVPAT, ICC, ADJ, 2018)
- Lander County (ICX with VVPAT, ICC, ADJ, 2018)
- Lincoln County (ICX with VVPAT, ICC, ADJ, 2018)
- Lyon County (ICX with VVPAT, ICC, ADJ, 2018)
- Mineral County (ICX with VVPAT, ICC, ADJ, 2018)
- Nye County (ICX with VVPAT, ICC, ADJ, 2018)
- Pershing County (ICX with VVPAT, ICC, ADJ, 2018)
- Story County (ICX with VVPAT, ICC, ADJ, 2018)
- Washoe County (ICX with VVPAT, ICC, ADJ, 2017)
- White Pine County (ICX with VVPAT, ICC, ADJ, 2018)

The State of New Jersey

- Burlington County (ICC, 2014)
- Camden County (ICC, 2013)
- Cape May County (ICC, 2013)
- Cumberland County (ICC, 2015)
- Essex County (ICC, 2013)
- Gloucester County (ICC, 2015)
- Hudson County (ICC, 2013)
- Hunterdon County (ICC, 2015)
- Mercer County (ICC 2013)

- Monmouth County (ICC, 2014)
- Morris County (ICC, 2015)
- Passaic County (ICC, 2015)
- Salem County (ICC, 2015)
- Union County (ICC, 2013)

All 33 counties in the State of New Mexico

(ICC, ICE, ICP-BMD, ICP, 2014)

52 Counties in the State of New York

(all except Albany, Erie, Nassau, Rockland, Schenectady and the five boroughs of New York City) (ICP, ICP-BMDICC, 2008)

The State of Ohio

- Belmont County (ICP-A, ICC, 2015)
- Guernsey County (ICE, ICC, 2013)
- Harrison County (ICP, ICE, ICC, 2014)
- Huron County (ICC, ICE, ICP-A, MBP, 2015)
- Muskingum County (ICP, ICE, ICC, ADJ, 2017)

The State of Tennessee

- Hamilton County (ICE, ICP-A, ICC, 2013)

The Commonwealth of Virginia

- Amelia County (ICE, 2016)
- Bedford County (ICE, 2015)
- Buchanan County (ICE, 2015)
- Craig County (ICE, 2015)
- Caroline County (ICP-BMD, 2015)
- Dickenson County (ICE, 215)
- Franklin County (ICE, 2015)
- King George County (ICP-BMD, 2014)
- Lee County (ICE, 2015)
- Buena Vista City (ICE, 2017)
- Sussex County (ICE, 2017)
- Smyth County (ICE, 2017)
- Greensville County (ICE, 2017)
- Louisa County (ICE, 2015)
- Mecklenburg County (ICE, 2015)
- Nottoway County (ICE, 2015)
- Page County (ICP- BMD, 2016)
- Radford City (ICE, 2016)
- Russell County (ICE, 2015)
- Salem City (ICE, 2016)
- Suffolk City (ICE, 2015)
- Waynesboro City (ICE, 2016)

The State of Washington

- Franklin County (ICX, ICC, AADJ, 2017)

The State of Wisconsin

- Door County (ICE, 2015)
- Fond du Lac County (ICE, 2016)
- Green County (ICE, 2015)
- Ozaukee County (ICE, 2016)
- Vilas County (ICE, 2016)
- Washington County (ICE, 2016)
- Winnebago County (ICE, 2015)

The Commonwealth of Puerto Rico

(ICP, 2016)

KNOWiNK

A list of jurisdictions who have selected the Poll Pad system is attached using the template provided in Systems and Jurisdictions Implemented.

#	County / State	Solution	Date / Year
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Section 1 – Background and Financial Capability

File 1-4 Financial Narrative

1.4 Describe how your company is financially positioned to handle a project of this size and scope under the timeframe required.

Dominion

As evidence of Dominion's financial capability to handle a project the size and scope of Georgia under the timeframe required, we have provided our most recent Audited Financial Statements, as requested, in response to 0-6 Financial Docs. Further, Dominion Voting is the second largest provider of elections across the United States and we continue to gain market share. Our use of COTS equipment from major manufacturers and preferred relationships and selling agreements with large COTS manufacturers and suppliers further bolsters our ability to deliver the proposed solution and ensure the ongoing availability to equipment, parts and services.

As detailed above, and throughout our proposal responses, Dominion has the financial capability, operational personnel and experience, development structure, systems of support, and established relationships in place to deliver the proposed solution on time and within budget.

We would be happy to provide any additional information, including financial documentation, additional customer references, selling agreements that will provide the peace of mind in deciding that Dominion is the partner of choice for Georgia elections.

KNOWiNK

Since the company's founding, KNOWiNK has generated a profit every year. KNOWiNK has been self-funding since its inception. The company has not raised any third party capital or debt. Generating a profit every year and not raising any third-party capital or debt has created an extremely strong balance sheet.

As further evidence of our commercial capacity, KNOWiNK has attached reviewed financial statements for 2017 and 2016 as well as unreviewed 2018 financial statements.

2018 KNOWiNK Financials

[redacted]

[redacted]

2017 KNOWiNK Financials

[redacted]

[redacted]

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2016 KNOWiNK Financials

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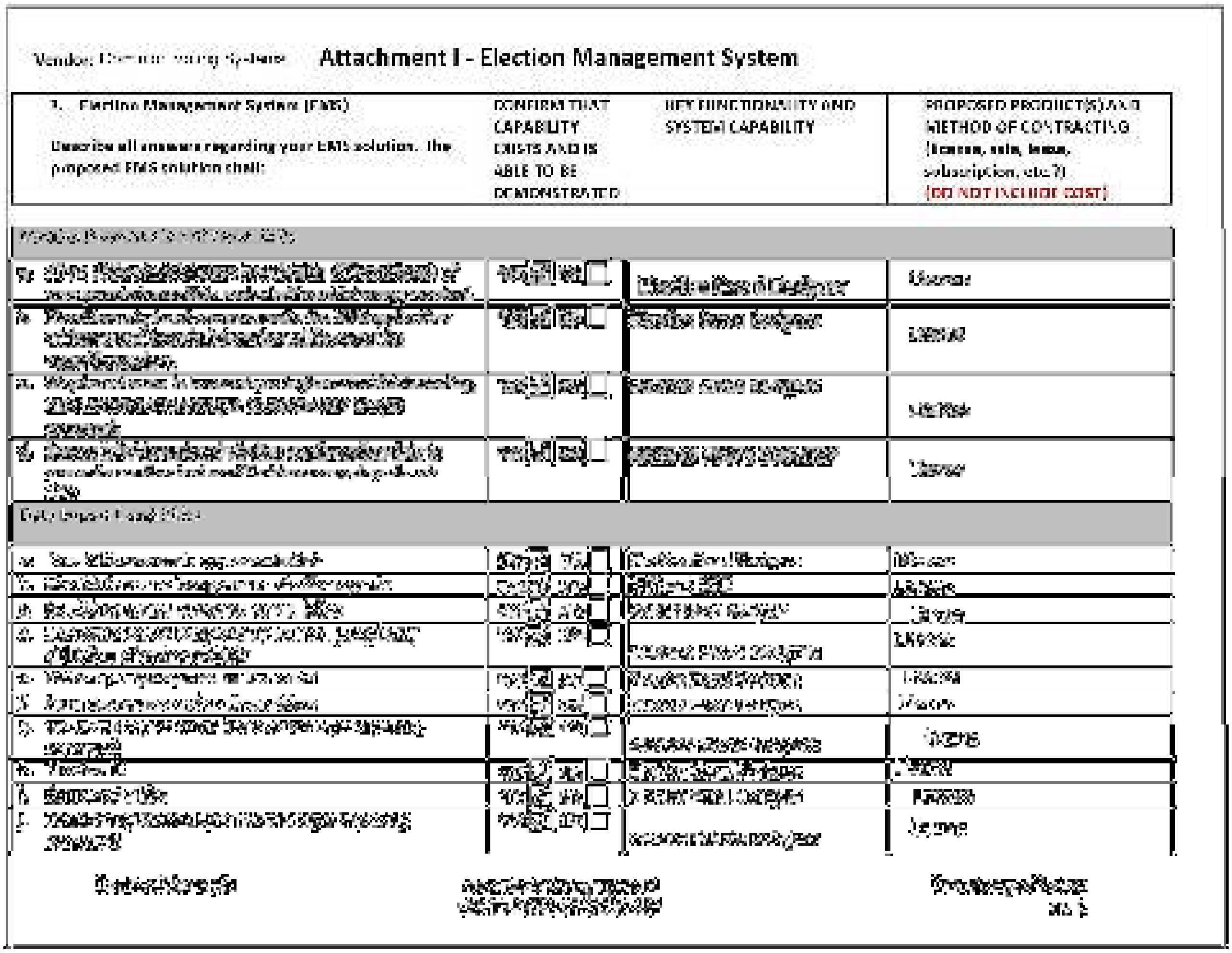
Section 2 – Election Management System

File 2-1 EMS

2.1 Complete the attached form titled "Election Management System" and include narrative.

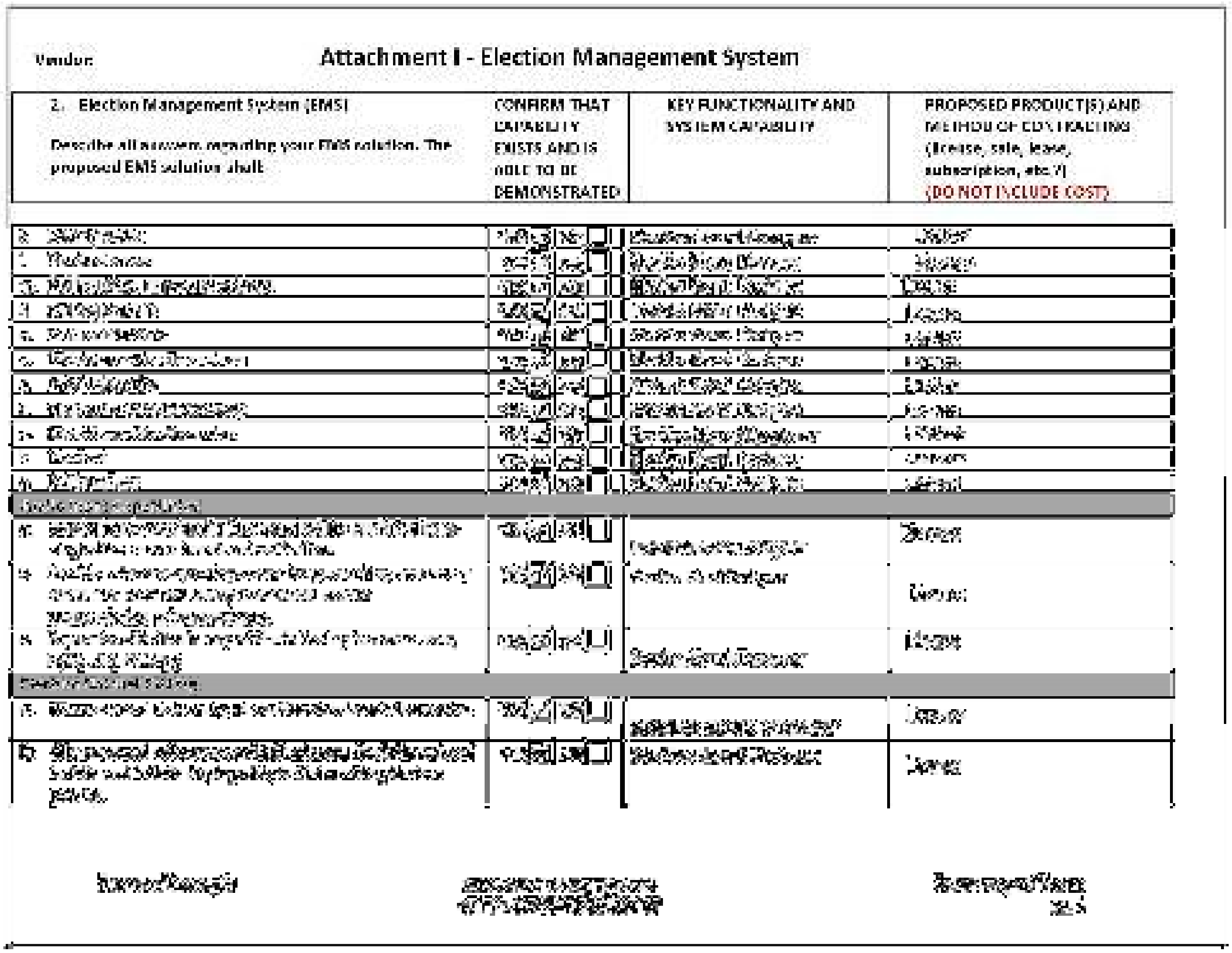
Below we provide Attachment I – EMS Form for your review. In addition, the pages following the completed Attachment I includes a narrative of Democracy Suite:



Vendor: Dominion Voting Systems

Attachment I - Election Management System

1. Election Management System (EMS) Describe all answers regarding your EMS solution. The proposed EMS solution shall:	CONFIRM THAT CAPABILITY EXISTS AND IS ABLE TO BE DEMONSTRATED	KEY FUNCTIONALITY AND SYSTEM CAPABILITY	PROPOSED PRODUCT(S) AND METHOD OF CONTRACTING (license, sale, lease, subscription, etc?) (DO NOT INCLUDE COST)



Vendor:

Attachment I - Election Management System

2. Election Management System (EMS) Describe all answers regarding your EMS solution. The proposed EMS solution shall:	CONFIRM THAT CAPABILITY EXISTS AND IS ABLE TO BE DEMONSTRATED	KEY FUNCTIONALITY AND SYSTEM CAPABILITY	PROPOSED PRODUCT(S) AND METHOD OF CONTRACTING (license, sale, lease, subscription, etc.?) (DO NOT INCLUDE COST)
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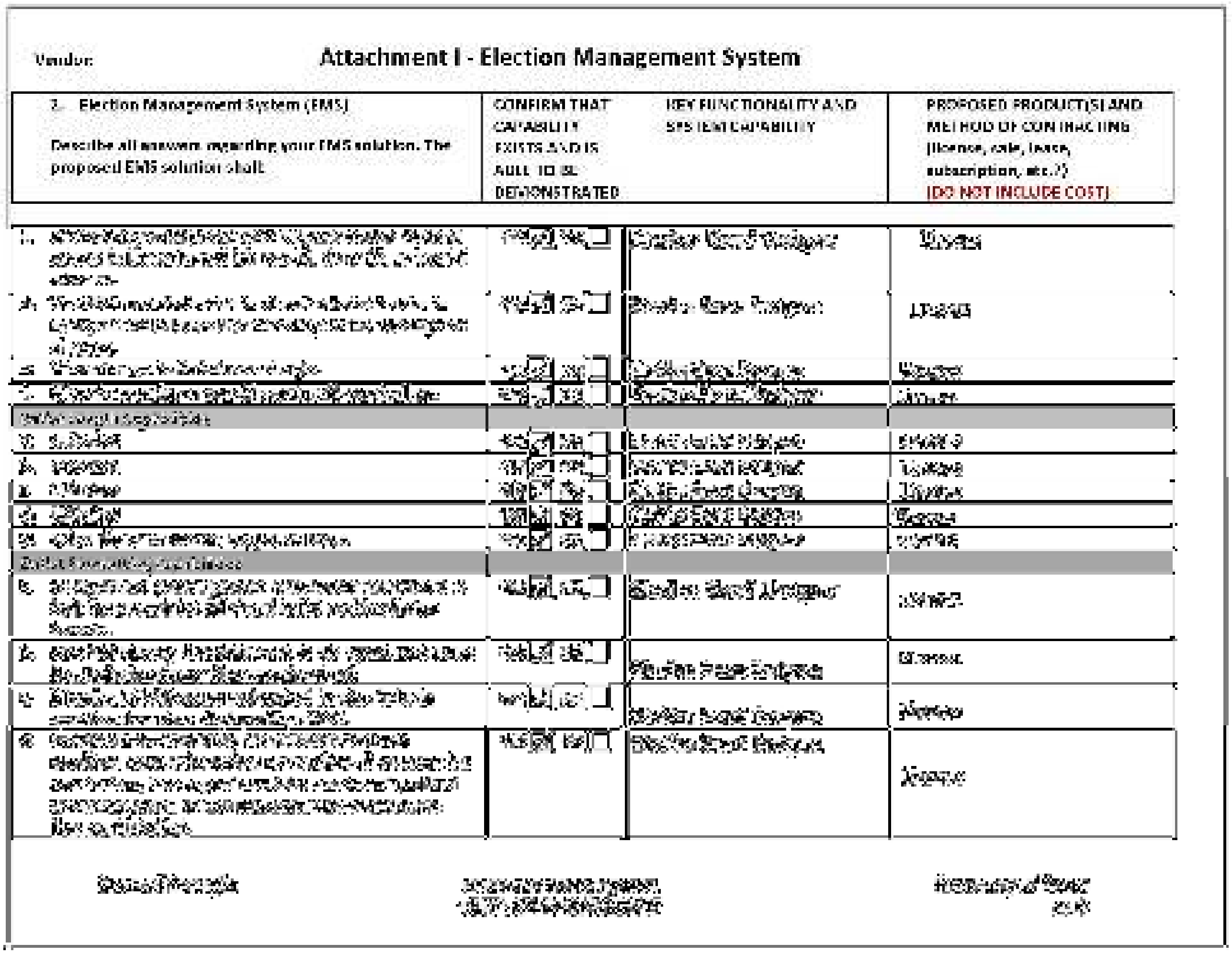

Vendor:

Attachment I - Election Management System

3. Election Management System (EMS) Describe all answers regarding your EMS solution. The proposed EMS solution shall:	CONFIRM THAT CAPABILITY EXISTS AND IS ABLE TO BE DEMONSTRATED	KEY FUNCTIONALITY AND SYSTEM CAPABILITY	PROPOSED PRODUCT(S) AND METHOD OF CONTRACTING (license, sale, lease, subscription, etc.?) (DO NOT INCLUDE COST)
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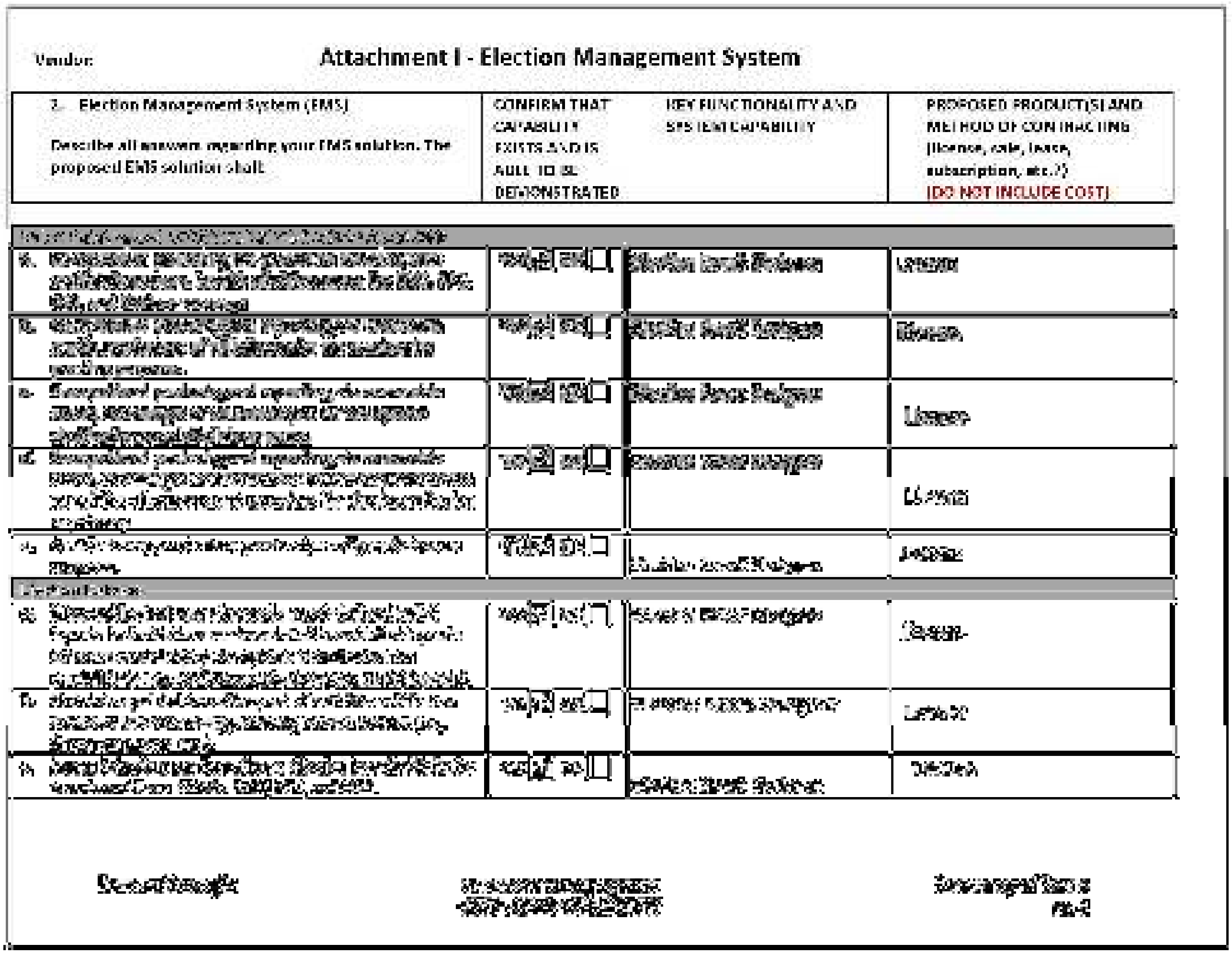

Vendor:

Attachment I - Election Management System

2. Election Management System (EMS) Describe all answers regarding your EMS solution. The proposed EMS solution shall:	CONFIRM THAT CAPABILITY EXISTS AND IS ABLE TO BE DEMONSTRATED	KEY FUNCTIONALITY AND SYSTEM CAPABILITY	PROPOSED PRODUCT(S) AND METHOD OF CONTRACTING (license, sale, lease, subscription, etc.?) (DO NOT INCLUDE COST)
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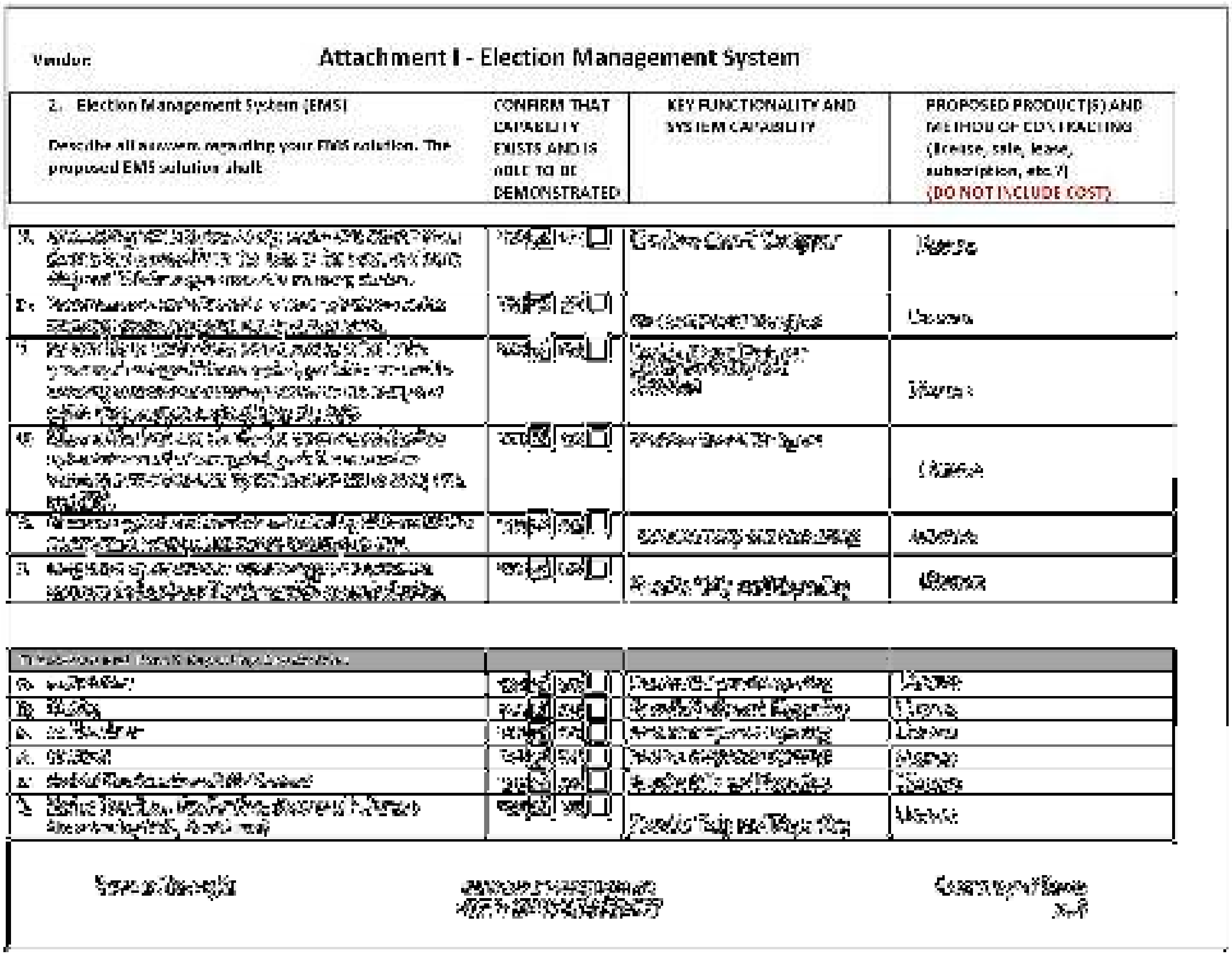

Vendor:

Attachment I - Election Management System

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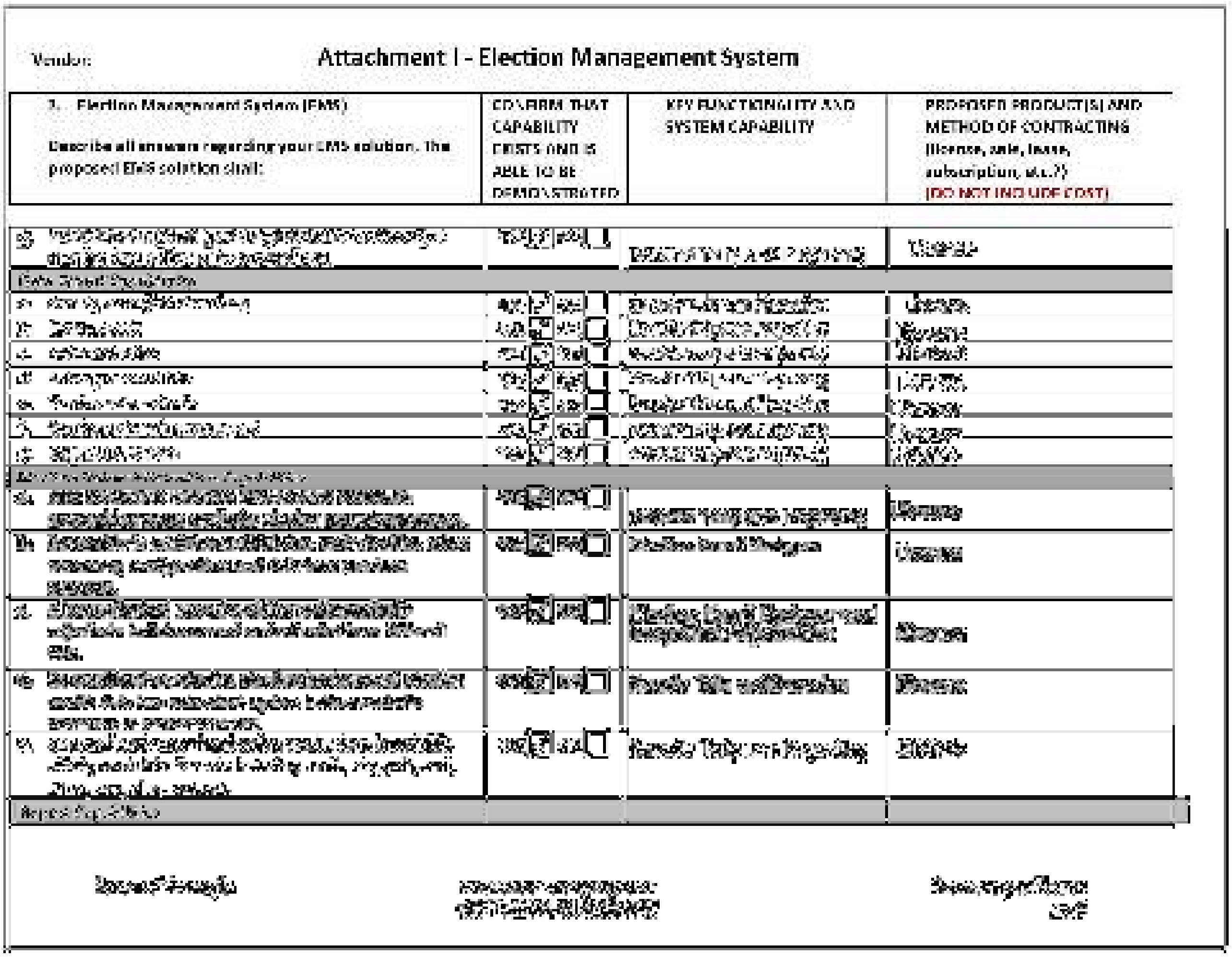

Vendor:

Attachment I - Election Management System

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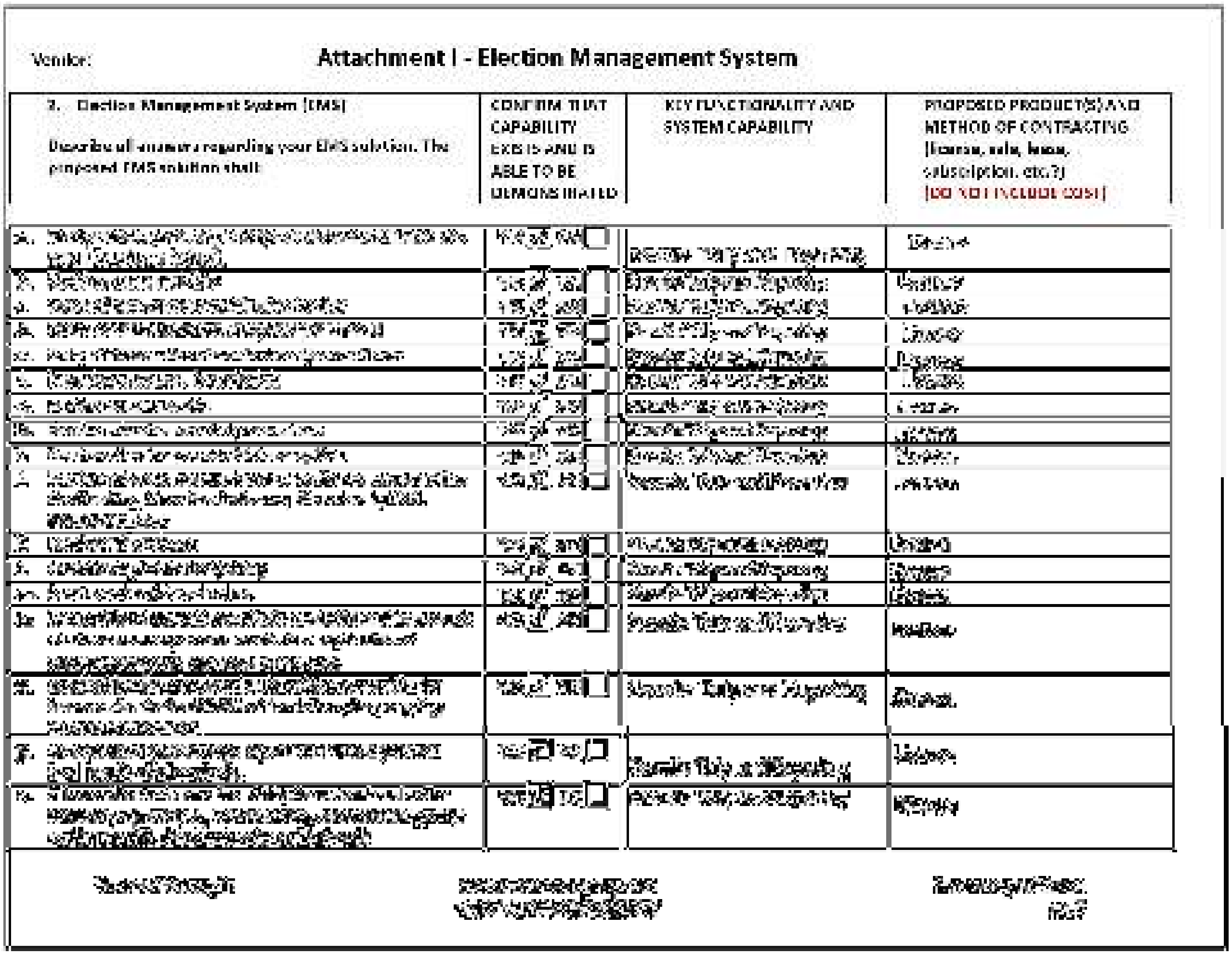

Vendor:

Attachment I - Election Management System

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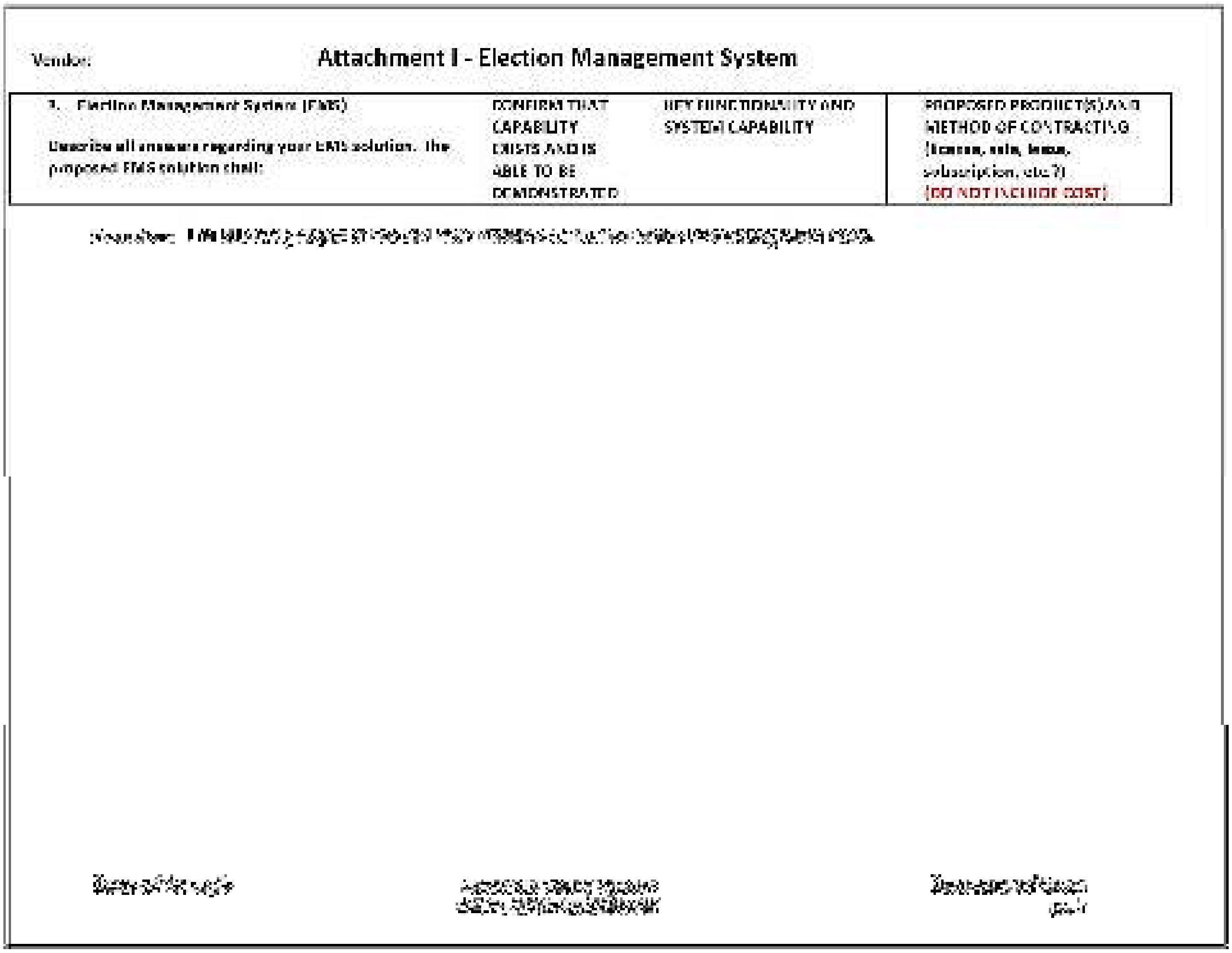

Vendor:

Attachment I - Election Management System

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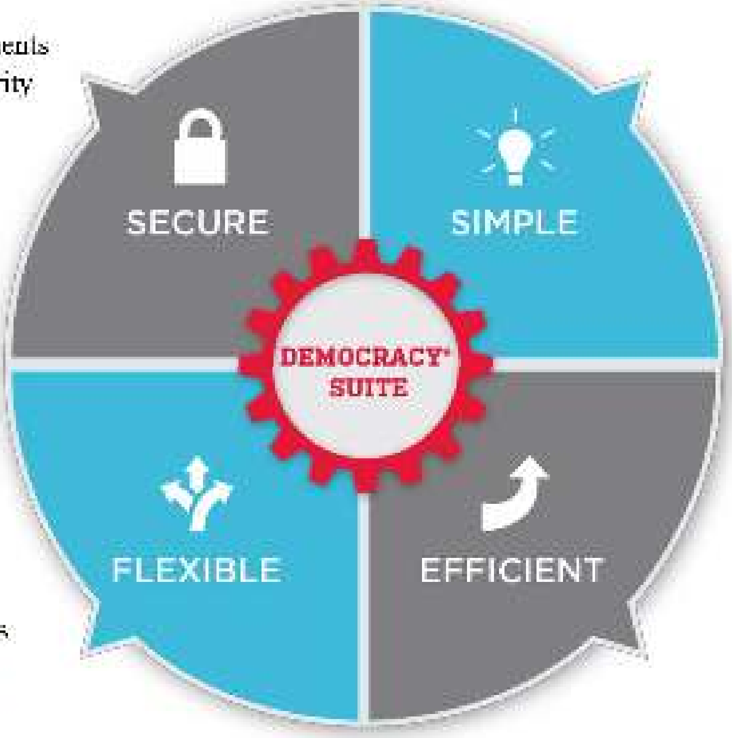
Democracy Suite Narrative

At the heart of our complete voting system solution is Democracy Suite, a robust and tested Election Management System that drives all voting channels out of a single comprehensive database; mail-in ballots, in person voting, accessible voting, and Uniformed Overseas Citizens Absentee Voting Act (UOCAVA)/Remote Accessible Vote by Mail(RAVBM). All pre-election and post-election tasks utilize the same database. From ballot layout to results reporting on Election Night, Democracy Suite is a complete, end-to-end elections solution. Democracy Suite provides a single, powerful and versatile platform for election management.

The Democracy Suite technology platform delivers an improved experience for the voter, long-term sustainability, operational efficiencies, transparency and cost-savings.



- Designed to meet the latest EAC VVSG requirements with industry leading FIPS 140-2 compliant security protocols
- Complete end-to-end system auditability
- Symmetric and asymmetric encryption for data confidentiality
- All communications channels are encrypted with SSL protocols
- Reduced complexity for election officials, as programming and results consolidation takes place out of a single unified database
- With easy-to-use, intuitive user interfaces across the entire product line, your staff and poll workers are able to confidently carry out the tasks in their workflow
- Capable of handling many types of elections, voting rules (i.e. straight party, open or closed primaries, etc.) and a range of jurisdiction sizes
- Built-in tools to help you simplify and streamline your process, increase productivity, and save you time and money

- A diverse range of EMS modules and voting channel singular devices with flexible configurations to meet jurisdictional needs
- Save and re-use ballot templates, election event definitions, and report templates so you can quickly and easily generate future election projects

Benefits of using the Democracy Suite System

- Democracy suite powers the entire voting system out of a single comprehensive database, with all the tools needed to simplify and streamline the process.
- All voting-channels whether absentee ballots, accessible voting, or precinct-based voting – are supported and powered by Democracy Suite.
- All pre-election and post-election tasks take place out of the same database – from ballot programming to results reporting on Election Night, Democracy Suite is a complete, end-to-end elections solution.
- It is designed to suit the needs and requirements of jurisdictions large and small can be easily scaled to support any size jurisdiction.
- The State will be equipped with Dominion's Democracy Suite Election Management System, which is comprised of several modules to manage an election project from start to finish. Democracy Suite is composed of two main modules:
    - Through the **Election Event Designer (EED)** module, the election definitions of the jurisdiction such as districts, races, and candidates can be input or imported. The Election Data Translator utility allows the import of the election definition, further simplifying the election definition process for the County or State Administrator.
    - Through the **Results Tally and Reporting (RTR)** module, the counties can easily and quickly receive and accumulate election results from their precincts and rapidly report them to the State for accumulation and distribution of State-wide election results. The system allows for the configuration and creation of a wide range of reports that can be easily accessed or customized.
- The system allows for the configuration and creation of a wide range of reports that can be easily accessed or customized.

Election Event Designer

The Election Event Designer module manages all of the information needed to define the election. Definition of an election is a complex task, and the event definition module allows for the easy entry and tracking of districts, precincts, contests, candidate names, voting locations and ImageCast tabulators and ICX BMD devices simultaneously. Election Event Designer allows jurisdictions to choose from a variety of language options for an election project.

Election definition data may be entered manually or imported using the Election Data Translator utility. The Election Data Translator utility allows the import of the election definition from an Excel file, further simplifying the election definition process for the County or State Administrator. Election definition data may be exported or copied from prior election databases to speed up the process of coding subsequent elections.

Election Event Designer uses the State's geopolitical and election event data to automatically calculate the required ballot styles and generate full-sized press-ready ballots in industry-standard PDF format. EMS lays out contests on the ballot in the most space-efficient manner possible, in order to minimize printing costs. Election Event Designer offers extensive options or ballot styling with full user control – choose fonts, line weights, number of columns, multiple languages, multi-card or double-sided, landscape or portrait style, variety of voting target options, colored headers, etc. A unique ballot ID barcode distinguishes each ballot style. The ballot is 8.5" wide and can vary between 11"-22" in length.

The EMS uses Cepstral, a third-party text-to-audio synthesizer, to automatically generate audio ballots for the ImageCast Precinct and the ImageCast X. Users also have the option to import human-recorded audio using Cepstral's Swifttalker application. The system outputs audio ballots (PNG images, SPX audio files and XML definition files), definition reports (XML, Excel or HTML files), and election definition files required to program all tabulators and voting devices.

The in-person voting devices are defined and configured in the Election Project and these parameters are passed to the voting machines via the election files on the memory media. Tabulators are automatically configured to know which ballot styles to accept or display to the voter, how the unit should interact with voters and where results files are uploaded. The ImageCast X will store all available ballot styles and will present the correct ballot style to the voter when the voter inserts their activation card and activates the voting session. The poll worker only needs to follow the Election Day procedures established by the State/County and never needs to make a decision regarding the voting device's settings at the voting locations.

Results Tally and Reporting

The EMS Results Tally and Reporting (EMS RTR) module is used on Election Night upon close of polls to accumulate results from tabulators and generate results reports. The application allows officials to physically transport memory media to a central processing office.

For the EMS RTR module, inputs represent encrypted and signed election result files (proprietary format), log files (plain text) and scanned ballot images with AuditMark, produced by the Precinct and Central tabulators (PNG and TIFF images). Outputs represent a variety of election result reports, as well as auditing information (XML, HTML, CSV, MS Excel and PDF formats).

The program automatically uploads the result files into the results tally module, and consolidated results are verified, tabulated, and published. Once the vote data is uploaded into the result tally module, the flow of results to the public and media can be controlled.

RTR allows election officials to review the results before releasing them, and the system provides a number of reporting methods, including but not limited to Summary and Precinct-level (Statement of Votes Cast) results reports. In addition to the static, pre-defined reports found in most reporting systems, RTR's Summary and Precinct-level reports use the Microsoft SQL Server Reporting Services engine to offer maximum flexibility to the user. These reports feature a variety of configurable options and filters, including detailed breakdowns of provisional ballots cast, ballots cast during early voting, on Election Day, and by mail. Election administrators may use the default settings or configure the data fields included in the reports depending on the target audience. Reports may be filtered by precinct, district, contest, tabulator, or voting, location, to narrow in on specific results data of interest contained within the election database.

The Democracy Suite Results Tally and Reporting (RTR) module features a one-click results export to a variety of formats and can meet the State's election night reporting requirements. In addition, the module features numerous export types for compatibility with third-party web-based Election Night Reporting software.

In Democracy Suite 5.5A, the Democracy Suite Results Tally and Reporting module also includes a full export of all Cast Vote Records (CVR) from the system. This export is available in a JSON format to support any risk-limiting audits or post-election analysis on individual vote records. The CVR export includes references to the ballot image data from all tabulator channels as well as providing a full, robust audit solution on a ballot-by-ballot basis.

Core Technology – Ensuring Accurate and Transparent Elections

- The Democracy Suite Election Management System handles all activities related to your election. It produces ballots and tabulator information and is enhanced by Dominion's core **Dual Threshold and AuditMark technologies.**
- Dual Threshold technology has a user-defined low and high marginal mark threshold to ensure that each and every voter's ballot will be read the same every time. If a voter does not properly fill in the oval while marking their ballot and their oval mark falls in the marginal mark zone, the system will inform the voter of the Marginal Mark and the **onus of clearly defining their intent is on the voter,** not the Election Official.
- The AuditMark auditing system is, however, what makes the Dominion difference and sets us apart from other vendors in the industry. **It is the only system that digitally stores an image of every ballot cast along with a record of how the ImageCast tabulator interpreted each vote,** ensuring a completely transparent and auditable election.
- Administrators find it a great comfort when reviewing ballot images during recounts and every image is accompanied by this **clear, digital, human-readable AuditMark record.**
- We take particular pride in this unique feature, because it demonstrates how seriously Dominion takes **our policy of being 100% accountable** for each and every vote cast.

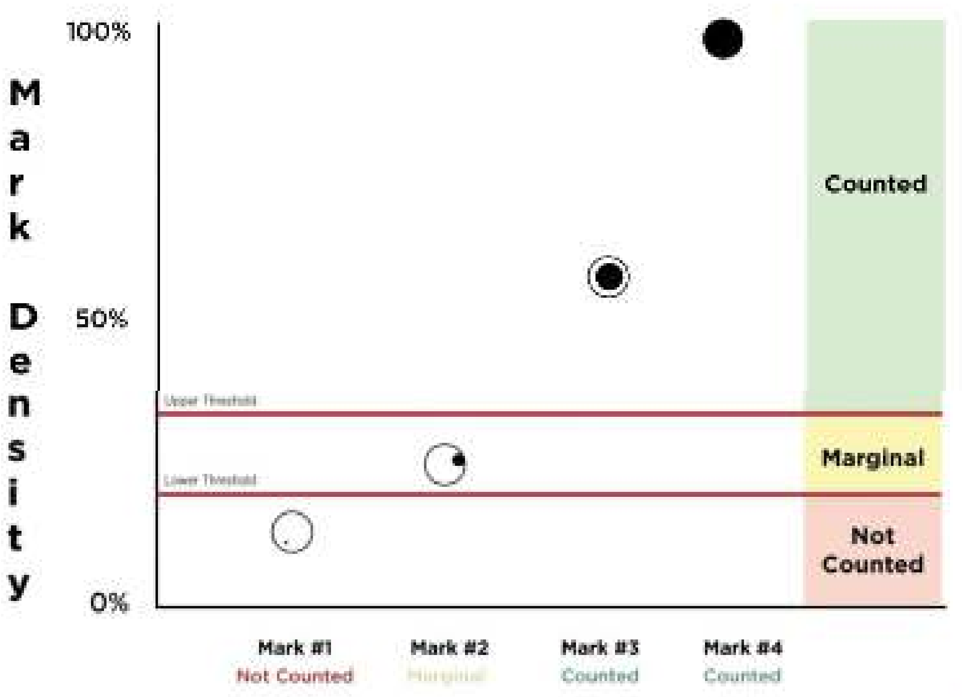
Dominion Voting Systems has invested in the development of technology that truly sets its products apart from the competition. Dominion's core technologies focus on ensuring two key aspects of the electoral process – **accuracy and transparency.**

Dual Threshold Technology (Marginal Marks)

From its early beginnings, Dominion continues to set the standard in digital image acquisition and analysis in the tabulation of digitally scanned ballots. When a hand-marked ballot is scanned by an ImageCast tabulator – at the precinct level or centrally – a complete duplex image is created and then analyzed for tabulation by evaluating the pixel count of a voter mark. The pixel count of each mark is compared with two thresholds (which are defined through the Election Management System by the Election Official) to determine what constitutes a vote.

If a mark falls above the upper threshold, it is determined to be a valid vote. If a mark falls below the lower threshold, it will not be counted as a vote. However, if a mark falls between the two thresholds (known as the “ambiguous zone”), it will be deemed as a marginal mark and the ballot will be returned to the voter for corrective action (please see diagram below).

With this feature, the voter is given the ability to determine his or her intent at the time they cast their ballot, not an inspection or recount board after the fact, when it is too late. The chart below illustrates the Marginal Mark threshold interpretation.



Dual Threshold Mark Detection - Marginal Marks

Dominion’s Exclusive Digital Ballot AuditMark

Dominion’s AuditMark technology will allow Georgia counties to provide greater transparency in the electoral process. Every single ballot in the election is imaged and appended with Dominion’s patented AuditMark, a record of how the system interpreted the voter’s intent. The **AuditMark is the only technology that proves a clear and fully auditable single vote cast record for every ballot cast.**

The AuditMark Advantage

Transparency: Our system is the only one that stores a complete image of every ballot cast, along with the audit trail for that ballot visually affixed to the image.

Accuracy: The audit trail shows how the tabulator interpreted the vote ballot markings of the secure barcode, at the time the ballot was cast. By viewing this image, an election official can easily verify that the tabulator has correctly interpreted the voter’s selections on the ballot.

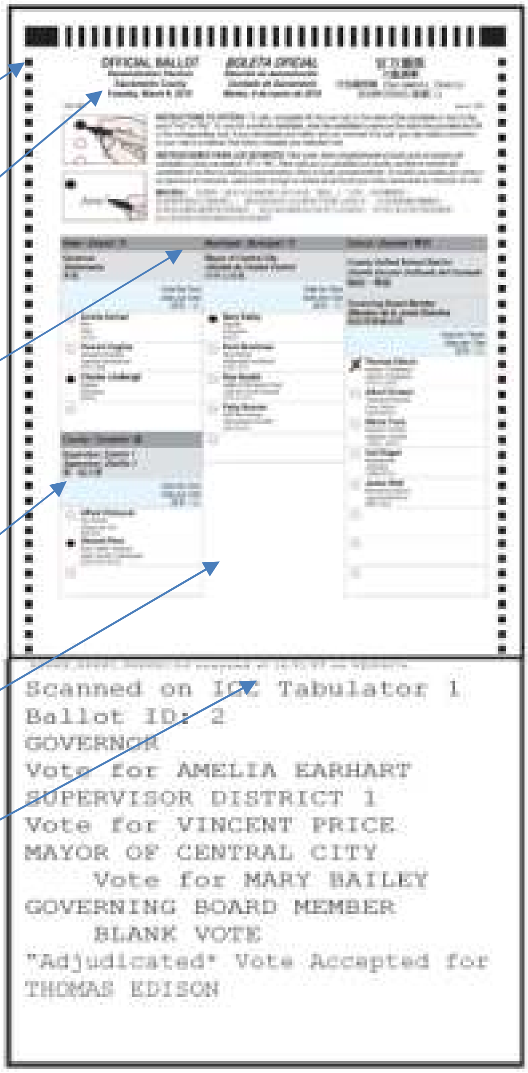
Trust: Furthermore, by randomly opening a small number of image files and verifying that the audit trail displays the correct results, the election official can quickly develop a high level of confidence that all of the ballots have been interpreted correctly.

In practice, the AuditMark feature can used as:

- A method to test machine integrity before an election
- A method of obtaining confidence that the equipment is functioning properly
- A method to completely audit the entire election
- A method to enhance recounts

Hand-Marked Ballot Image with Audit Trail

This is a sample ballot image for a centrally-processed ballot. All ballots are imaged and stored for auditing purposes. The image contains:



```
Scanned on ICC Tabulator 1
Ballot ID: 2
GOVERNOR
Vote for AMELIA EARHART
SUPERVISOR DISTRICT 1
Vote for VINCENT PRICE
MAYOR OF CENTRAL CITY
     Vote for MARY BAILEY
GOVERNING BOARD MEMBER
     BLANK VOTE
"Adjudicated" Vote Accepted for
THOMAS EDISON
```

1. **Timing Marks:** Fixed marks on the ballot that the scanner reads in order to determine the ballot's orientation and identify voting targets.

2. **Ballot Header:** Includes the name of the election and any other text the jurisdiction provides. Can also include the organization's logo.

3. **Instructions:** Formatted free text that the jurisdiction can customize.

4. **Contest Headings and Choice Fields:** These areas support customized items and formatting including images.

5. **Voting Targets:** Voting targets can be placed on the left or right of the candidate's name.

6. **Columns:** Ballots can have one, two, three or four columns.

7. **AuditMark**: Ballot-level audit trail feature shows how the tabulator interpreted the voter's marks.

ImageCast X Choice Summary Ballot Image with Audit Trail

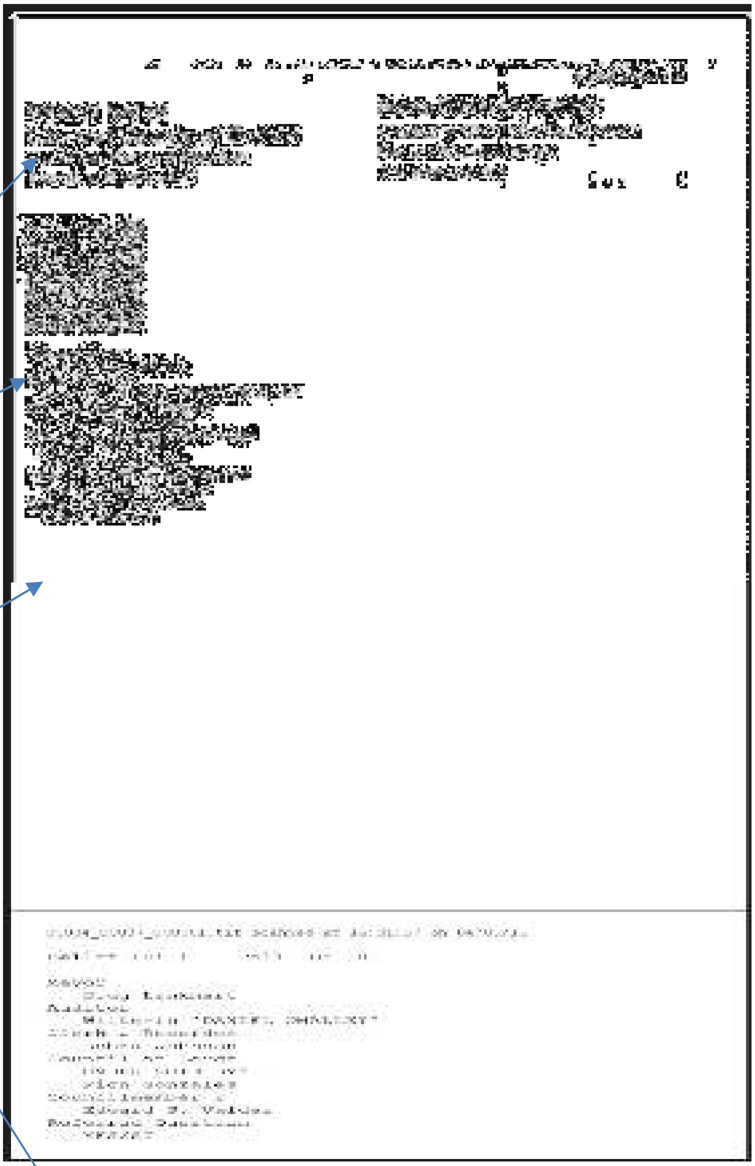
This is a sample ballot image for a centrally verifiable choice summary ballot. All ballots are imaged and stored for auditing purposes.

1. **Ballot Header**: Includes the name of the election and any other text the jurisdiction provides.

2. **Secure QR Code**: Voter's choices are digitally signed in the secure barcode image that can only be scanned and decoded by Dominion's ImageCast tabulators.

3. **Ballot Data**: Clear image of all text, ballot contest headings, and voter choices.

4. **AuditMark**: Ballot-level audit trail feature showing how the tabulator decoded the barcode image and counted the voter's choices. Comparing the AuditMark to the written summary verifies that the system accurately recorded the voter's selections.



Section 2 – Election Management System

File 2-2 EMS Validation

2.2 Describe any software/firmware validation tools built into the device for use in installation, pre-election, and post-election testing to verify that software/firmware has not been modified.

All digital records are encrypted and signed, so the signature is the hash checksum. This applies to any software on the machine, but also to all election data. Should anything be added, the cryptographic hash will immediately be incorrect, which the system will detect and respond appropriately.

Dominion prides itself on the quality and security of our proposed solution for Georgia. Our demonstrated ability to certify and implement successful end-to-end systems begins with ensuring data quality and security from the development to the production phase of our installations.

All products in the Democracy Suite platform follow best software and application development practices, including additional source code quality and security procedures. All software programs satisfy recommended coding standards, as well as code styling guidelines as required by EAC VVSG standards. Automated code review processes are in place, that verify compliance with industry accepted coding standards for programming languages. In addition, proper system and software hardening procedures are clearly defined and regularly tested. Testing is performed on the lower source code level using code analysis tools, and at the system level using Nessus vulnerability testing tool. Data integrity and confidentiality is implemented according to NIST defined and FIPS validate procedures and algorithms.

All the code is stored in a secure manner within our organization and regularly backed up. Dominion's IT personnel further improve overall security through the usage of firewalls, intrusion detection/prevention systems, comprehensive employee training, and company-wide security policies. Continuous integration is performed on a daily basis along with in-depth testing, which maintains constant code quality. Documentation covers recommended secure configuration scenarios from securing host operating systems (by using antivirus software, firewall configuration, hardening scripts, performing regular updates, and being in an isolated environment) through encryption of application communication mechanisms, hard disk encryption, and election file encryption. Voting locations are physically secured by trained professionals, machines (tabulators) are locked down from modification through the use of appropriate seals and are uniquely identifiable by having appropriate certificates stored for use in authentication.

Dominion uses multi-level assurance and quality control processes to ensure that all elements of our integrated voting system perform properly with every use. Internal acceptance testing is performed on each voting system on receipt from the manufacturer. By the time our products are purchased by the customer, they have gone through three full rounds of acceptance testing. Independent reviews of election databases are conducted to prior Logic and Accuracy testing. We recommend (and support our customers to conduct) precinct-level pre-election testing.

In addition to this rigorous testing and control program designed to catch errors, Dominion Voting regularly conducts process audits of our acceptance testing, and programming processes to ensure that errors never occur.

Section 2 – Election Management System

File 2-3 EMS Audit

2.3 Describe the proposed EMS' post-election auditing capabilities.

Dominion's Results Tally and Reporting module can assist election officials in performing election canvasses and risk-limiting audits. This tool is capable of sorting and filtering images of ballots by ballot style, precinct, polling location, contest and candidate, for the purposes of a recount or post-election audit. Officials can review all the digital ballot images in an election, or a subset of ballots based on the chosen filtering conditions.

This tool provides an efficient and user-friendly interface for reviewing ballot images and associated results, as well as providing a framework to support a variety of auditing methodologies.

Results Tally and Reporting allows multiple officials to access digital ballot images with their Digital Ballot AuditMark marks, digital Cast Vote Records, and related review notes. Filtering options enables the creation of ballot review subsets for specific audit reviews. This tool resides in a secure post-election environment that is separate from EMS.

Officials can create ballot review sets by filtering for any given audit scenario including specific requests from Election Committees and other internal and external parties. Users may make notes to individual ballots and ballot review sets to aid in follow-on reviews and audit discussions. Administrators may create and assign a ballot review set to a specific official. Upon reviewing each ballot, officials may add a note, mark it for additional review, or mark it as complete. Ballots within a ballot review set may be sorted against these attributes as desired.

Efficiency is realized through filtering and sorting capabilities. Officials may select specific filter criteria including District, Precinct, Precinct Split, Contest, Candidate, Tabulator, Out stack Conditions, Mark Fill Percentage, Adjudicated, Ballot Type, and or Ballot ID.

Flexibility is realized through user-friendly screen designs to aid in the rapid selection of filters and their choices in both large and small data set scenarios. Furthermore, the Administrator may choose to distribute a large ballot review set across multiple users to speed the process.

The Cast Vote Record, (CVR) export, in JSON format, includes the highest degree of granularity, detailing up to each mark read by the system.

Results Tally and Reporting allows for intricate filtering and searches on the universe of ballots, including loading sets of ballots, precincts, ballot styles, districts to be retrieved. The system will allow authorized users to read the output of any system that generates random sampling of ballots.

This process will generate ballot sets that can be reviewed by multiple parties. The ballot set will contain the ballot images with all the AuditMarks, and the cast vote record for each ballot.

The use of the audit features is included as part of the training curriculums. In addition, Dominion will work with County Technicians on-site to assist as necessary

Section 2 – Election Management System

File 2-4 EMS Virtual

2.4 Define how the proposed EMS can be virtualized to run on GASOS and county virtual operating system (OS) environments.

Dominion's Democracy Suite is on a closed network that is certified in a manner that does not allow virtualization with outside systems. We would be happy to work with the State and individual counties to develop data bridge and exporting capabilities outside of the EMS; however, for security and certification purposes, the EMS will not be virtualized to run on the GASOS operating system.

Section 2 – Election Management System

File 2-5 EMS Provisional

2.5 Describe how the proposed EMS configures BMD, PPS, and CSD for provisional balloting.

The voter is issued an activation card which gives them access to a provisional ballot. Once the voting session is completed and the ballot is printed, these provisional ballots go into a Provisional Ballot envelope, for central office processing, where current provisional ballot handling procedures will continue to be observed. The ICX BMD will be programmed to accept any county ballot once the activation is done, thus allowing an out of precinct voter to mark their ballot. If the voter is challenges after going thrpugh the in poll registration process, a poll worker could manually select a Provisional ballot be displayed for the voter.

For provisional voting, there is a provisional voting mode available for the ImageCast tabulators. Typically, when this mode is enabled on a machine, the ballot is scanned by the machine so that the voter can confirm with a review that it is being properly interpreted and then the ballot is given back. The ballot goes in an envelope for "Provisionals" and is only counted once the ballot is deemed legitimate (e.g. once the voter's eligibility is established at some point after the close of polls). The provisional votes are added to the results manually to be included in the final vote totals. The EMS Results Tally & Reporting software has the ability to provide summary results by precinct, by district, by county, and by contest for each vote category, such as: for election day, early voting, absentee voting, and total votes. Absentee by Mail, Early Voting (if used), Election Day, and Provisional Ballots can be defined as Counting Groups in Results Tally and Reporting, allowing this result report tracking.

Section 2 – Election Management System

File 2-6 EMS Ease of Use

2.6 Ease of Use for GASOS and Local Election Officials: Provide and demonstrate customer experiences via referrals and specific case studies or white papers including access, special features, and any other customer feedback.

Dominion works with more than 3,000 entities across North America to provide elections services, software and hardware. We pride ourselves on the partnership that we strive to build with each customer.

In addition to the references we provide in response to 0-7 References, we would like to offer several letters of reference from larger entities that are currently utilizing Democracy Suite and a similar product array as we are proposing in Georgia. Letters from Sacramento County and Contra Costa County, California will provide a high-level overview of the success we have experienced through the implementation and use of our system.

As letters can only provide a snapshot of the user experience, we would also like to provide several links to several testimonial videos produced in conjunction with our customers in the City and County of Denver, and Clark County, Nevada. We feel these video testimonials provide a picture of the type of partnership we commit to developing.

City and County of Denver:

https://www.youtube.com/watch?v=Zyqg-LcAkC0

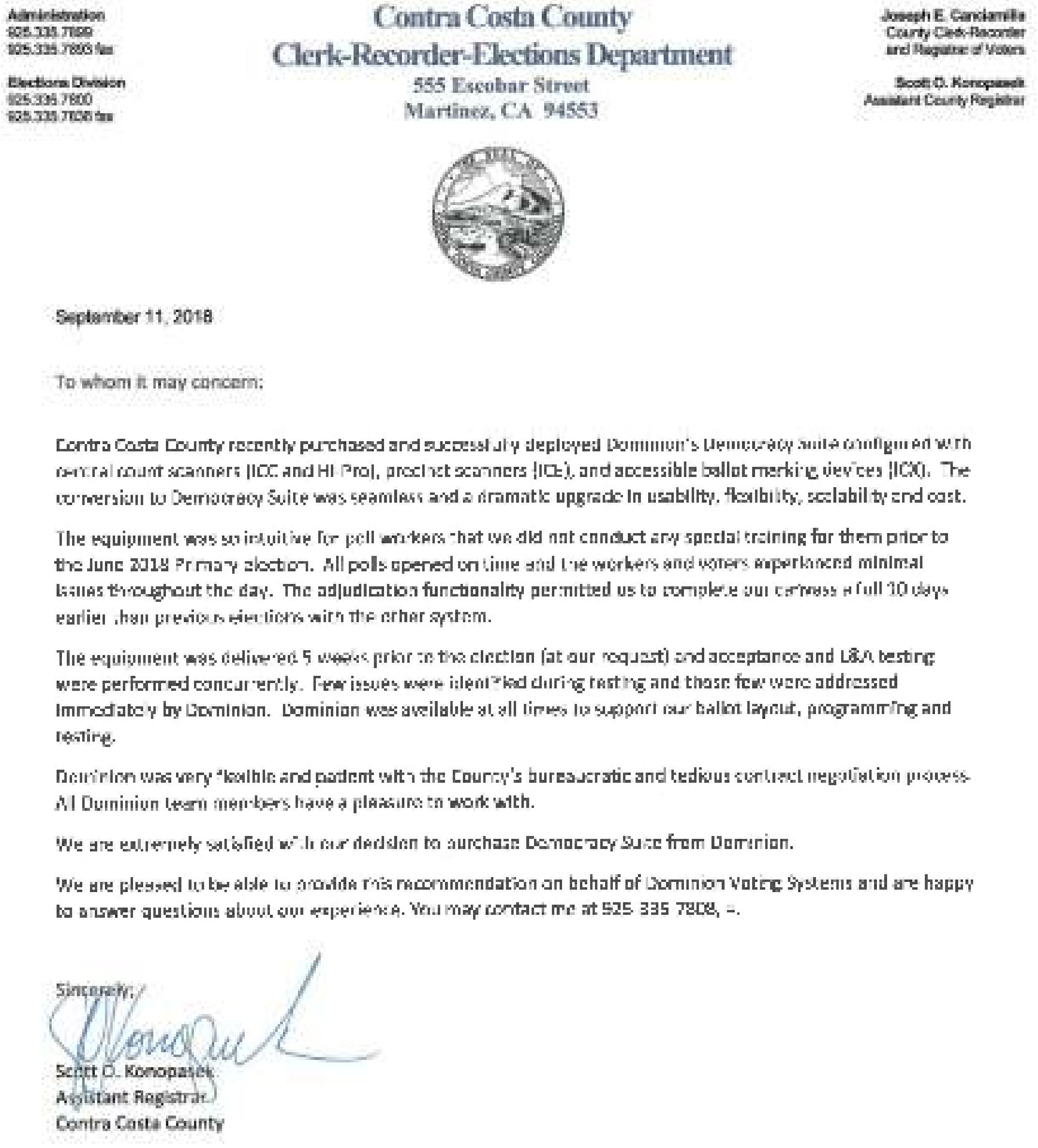
Clark County Video #1 -2018

https://www.youtube.com/watch?v=WejC40bgvic

Clark County Video #2 – 2017

https://youtu.be/j9TsDwsHVPA

Letters of reference provided on the following pages:



Administration
925.335.7899
925.335.7893 fax

Elections Division
925.335.7800
925.335.7836 fax

Contra Costa County
Clerk-Recorder-Elections Department
555 Escobar Street
Martinez, CA 94553

Joseph E. Canciamilla
County Clerk-Recorder
and Registrar of Voters

Scott O. Konopasek
Assistant County Registrar

September 11, 2018

To whom it may concern:

Contra Costa County recently purchased and successfully deployed Dominion's Democracy Suite configured with central count scanners (ICC and HI-Pro), precinct scanners (ICE), and accessible ballot marking devices (ICX). The conversion to Democracy Suite was seamless and a dramatic upgrade in usability, flexibility, scalability and cost.

The equipment was so intuitive for poll workers that we did not conduct any special training for them prior to the June 2018 Primary election. All polls opened on time and the workers and voters experienced minimal issues throughout the day. The adjudication functionality permitted us to complete our canvass a full 10 days earlier than previous elections with the other system.

The equipment was delivered 5 weeks prior to the election (at our request) and acceptance and L&A testing were performed concurrently. Few issues were identified during testing and those few were addressed immediately by Dominion. Dominion was available at all times to support our ballot layout, programming and testing.

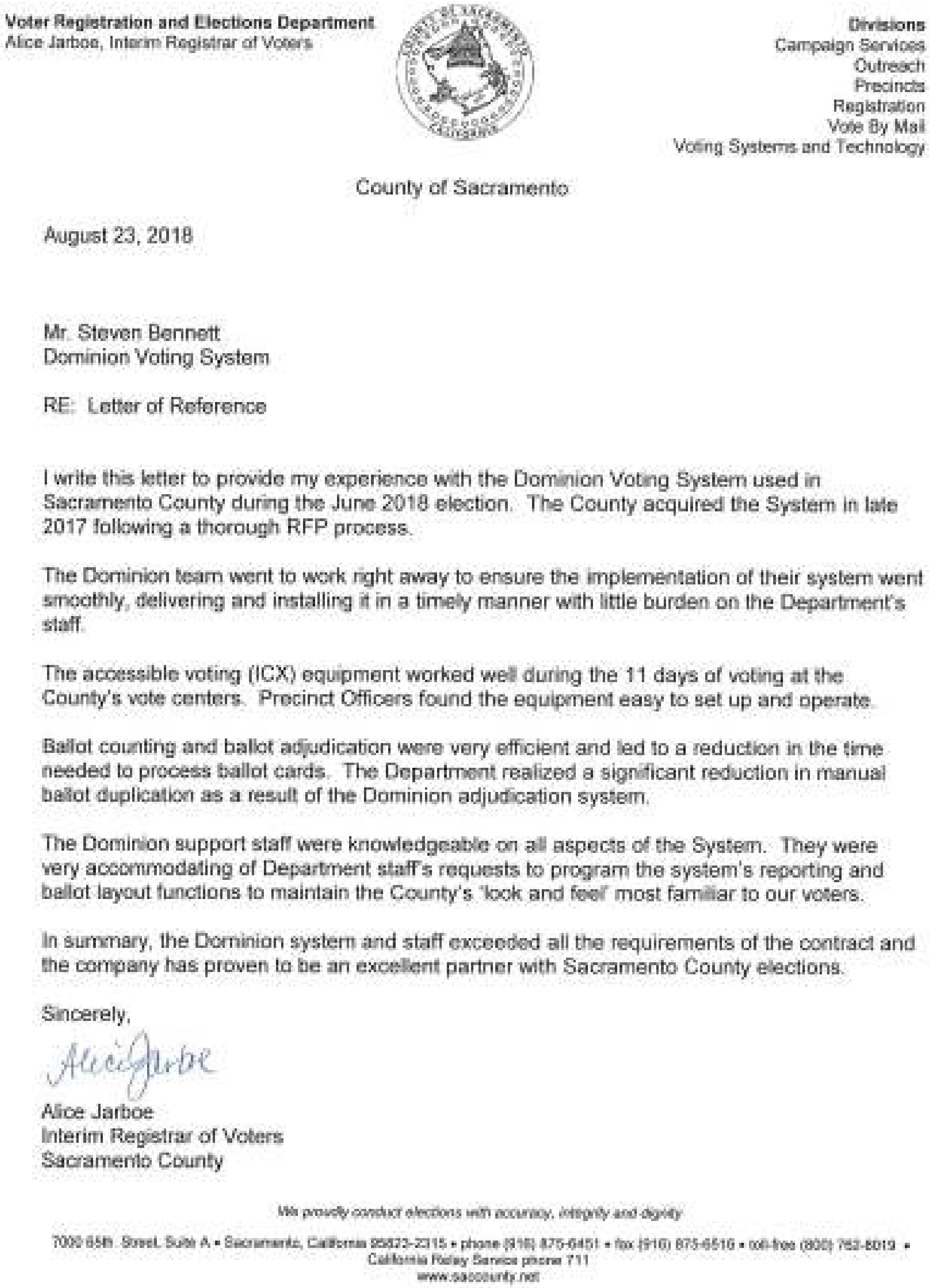
Dominion was very flexible and patient with the County's bureaucratic and tedious contract negotiation process. All Dominion team members have a pleasure to work with.

We are extremely satisfied with our decision to purchase Democracy Suite from Dominion.

We are pleased to be able to provide this recommendation on behalf of Dominion Voting Systems and are happy to answer questions about our experience. You may contact me at 925-335-7808, =.

Sincerely,

Scott O. Konopasek
Assistant Registrar
Contra Costa County



Voter Registration and Elections Department
Alice Jarboe, Interim Registrar of Voters

Divisions
Campaign Services
Outreach
Precincts
Registration
Vote By Mail
Voting Systems and Technology

County of Sacramento

August 23, 2018

Mr. Steven Bennett
Dominion Voting System

RE: Letter of Reference

I write this letter to provide my experience with the Dominion Voting System used in Sacramento County during the June 2018 election. The County acquired the System in late 2017 following a thorough RFP process.

The Dominion team went to work right away to ensure the implementation of their system went smoothly, delivering and installing it in a timely manner with little burden on the Department's staff.

The accessible voting (ICX) equipment worked well during the 11 days of voting at the County's vote centers. Precinct Officers found the equipment easy to set up and operate.

Ballot counting and ballot adjudication were very efficient and led to a reduction in the time needed to process ballot cards. The Department realized a significant reduction in manual ballot duplication as a result of the Dominion adjudication system.

The Dominion support staff were knowledgeable on all aspects of the System. They were very accommodating of Department staff's requests to program the system's reporting and ballot layout functions to maintain the County's 'look and feel' most familiar to our voters.

In summary, the Dominion system and staff exceeded all the requirements of the contract and the company has proven to be an excellent partner with Sacramento County elections.

Sincerely,

Alice Jarboe

Alice Jarboe
Interim Registrar of Voters
Sacramento County

We proudly conduct elections with accuracy, integrity and dignity

7000 65th Street, Suite A • Sacramento, California 95823-2315 • phone (916) 875-6451 • fax (916) 875-6516 • toll-free (800) 762-8019 •
California Relay Service phone 711
www.saccounty.net

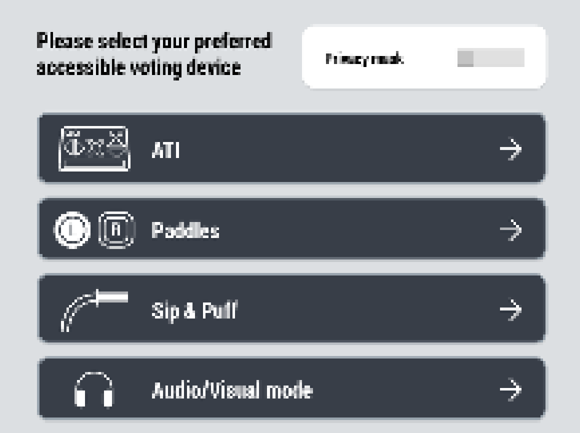
Section 2 – Election Management System

File 2-7 EMS ADA

2.7 Describe how the proposed EMS will support the building of ADA accessible ballots.

The proposed system outputs ballot content for accessible voting. The ballots created for UOCAVA and Interactive Online Sample Ballot users, as well as the ImageCast X BMD ballots, provide accessibility options such as font size (zoom), display options (contrast) audio options (volume/speed). Additionally, ballot navigation using the ImageCast X can be performed using an Audio Tactile Interface (ATI), which is a handheld device that is used by a voter during an Accessible Voting Session to navigate through and make selections to their ballot. The ATI:

- Has raised keys that are identifiable tactilely without activation (i.e. raised buttons of different shapes and colors, large or Braille numbers and letters)
- Can be operated with one hand
- Includes a 3.5 mm headphone jack
- Includes a T-Coil coupling
- Has a T4 rating for interference
- Uses light pressure switches
- Can be equipped with a pneumatic switch, also known as a sip and puff device, or a set of paddles.



The ImageCast X is compatible with a range of accessibility tools and can present the ballot in audio only, visual only or both audio/visual mode.

Democracy Suite 5.5A is compliant with VVSG 1.1 accessibility requirements. Additional information regarding the accessibility features of the ImageCast X Ballot Marking Device is included in response to 5-6 BMD ADA.

Audio Ballots

The ImageCast X supports the use of Audio ballots, which can be generated using any of three tools:

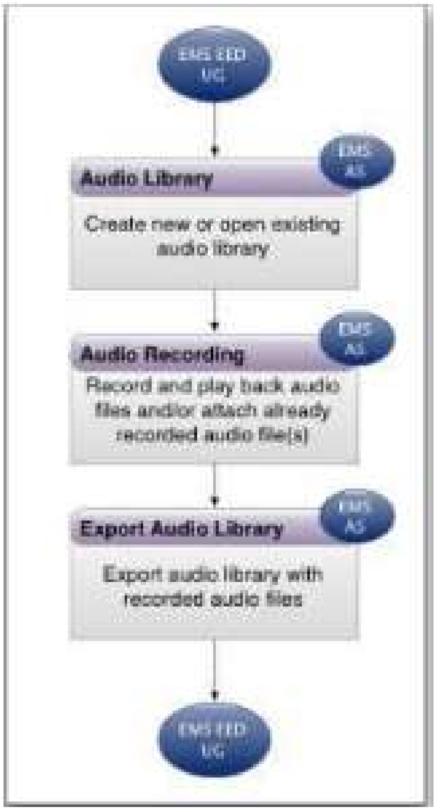
1. Using Cepstral, a third-party tool, as a component of EMS to synthesize audio.

Cepstral uses a text-to-audio synthesizer to automatically generate audio ballots for the ImageCast X. Users also have the option to import human-recorded audio, with or without the help of the EMS Audio Studio module, or fine tune pronunciation of the synthesized audio using Cepstral's Swifttalker application. The system outputs audio ballots (PNG images, SPX audio files and XML definition files), definition reports (XML, Excel, or HTML files), and election definition files required to program the ImageCast X, ImageCast Precinct and the ImageCast Central.

2. Using the EMS Audio Studio application to record and import audio files into an election project.

The Democracy Suite EMS Audio Studio application represents a pre-voting client application and as such, is used in combination with the EMS Election Event Designer (EMS EED) client application.

The functional flow of creating audio ballots using Audio Studio is detailed in the diagram below:

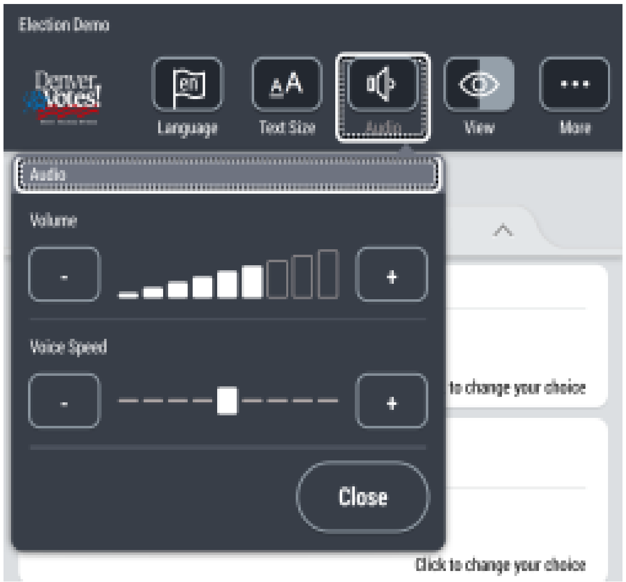

EMS EED UG
Audio Library
EMS AS
Create new or open existing audio library
Audio Recording
EMS AS
Record and play back audio files and/or attach already recorded audio file(s)
Export Audio Library
EMS AS
Export audio library with recorded audio files
EMS EED UG

3. Using an external application to produce audio files in the .wav (Wave) format. The audio files can be manually imported into Election Event Designer (EED) during the Ballots Generated project phase.

Audio files (in .wav format) that are produced by an external application may be manually imported and associated with the appropriate object.

The Audio Ballot creation process takes place during the ballot creation process, and is subject to the same approvals as paper or electronic ballots. During L&A, audio ballots are tested to ensure that all choices correspond to the readable format and audio ballot provides the same information as the readable ballot.

Following the creation of the Audio Ballots, voters benefit from an intuitive and customizable interface on the ImageCast X Prime, which presents the ballot in audio only, visual only, or both audio and visual modes, depending on personal preference. Voters can adjust the rate and volume of their audio ballot, as well as the text size and contrast of the display, or disable the display entirely for added privacy. Every voter configurable option is automatically reset to its default value with the initiation of each new voting session.



Voters can adjust the rate and volume of their audio ballot.

Voters are able to review, verify and correct their selections prior to printing their ballot, by audio and/or visual means. Voters are warned if they have missed, or undervoted a contest, and have the opportunity to go back and correct their selections. Once the ballot is printed, the voter scans their ballot on the ImageCast Precinct, the same as all other voters.

Deployed widely across California, Nevada, Colorado and Michigan, the ImageCast X has received the highest usability ranking by in-person voters with disabilities. The ImageCast X features the latest technological advances in accessible voting technology, providing more options for voters with accessibility needs to vote privately and independently.

At any time, the voter can select the Review button to view their selections on their ballot. The ballot review will show all of the contests on the ballot, and give warning messages if there are any issues with the ballot, such as an undervote or blank contest. If the voter wishes to modify a contest, they simply touch that contest from the review screen and they will be taken directly to that contest page so that they can update their selection(s).

Section 2 – Election Management System

File 2-8 EMS Interface

2.8 Describe how the proposed EMS interfaces with upstream and downstream applications.

Dominion has worked with many customers to transition from a legacy voting system to the Democracy Suite platform and is familiar with migrating data from many different voter registration systems to the Democracy Suite EMS. Dominion works with a number of different voter registration system vendors to ensure we can import data easily and efficiently . and is committed to working with them to ensure that the data from the voter registration system can be imported into the Democracy Suite system. There is no additional cost for the migration of data applied by Dominion. All election data from the Democracy Suite system can be exported for further evaluation or reporting in a variety of different standard file formats. In subsequent elections, election definition data may be exported or copied from prior election databases to speed up the programming process. State and county staff will be trained to be self-sufficient with importing and exporting procedures.

Dominion has successfully worked to ensure the easy and efficient upload of election data, including most recently SCORE in the State of Colorado, the State of Michigan's QVF program, and the State of New Mexico. Dominion has worked with multiple Statewide Voter Registration Systems that interface with Democracy Suite.

The Election Data Translator application provides the capability to bulk import election definition data into the EMS election project database from an Excel input file format. The application has the ability to cover well-known and well-defined data formats from other election and voter registration systems, into a standard native Election Data Translator input file format.

Election Data Translator's main function is to import data into template election project database and prepare project definition data for your election.

Election Data Translator uses Microsoft Excel spreadsheets .xlsx (Excel 2007, Excel 2010 or newer) with a strong defined structure. If you use a version of an Excel file which supports .xlsx (Excel 2007, Excel 2010 or newer), then you are required to save the exported .xml file in .xslx format before you import it into template database.

The Excel files can be prepared in the following ways:

1. Manually inputting the data into Excel
2. Exporting and modifying data from an existing EMS project through the use of the Election Data Translator's 'Export Mode'
3. Exporting data from another management system that follows the Election Data Translator format
4. Converting data from well-known external formats, into an import file format (using Election Data Translator)

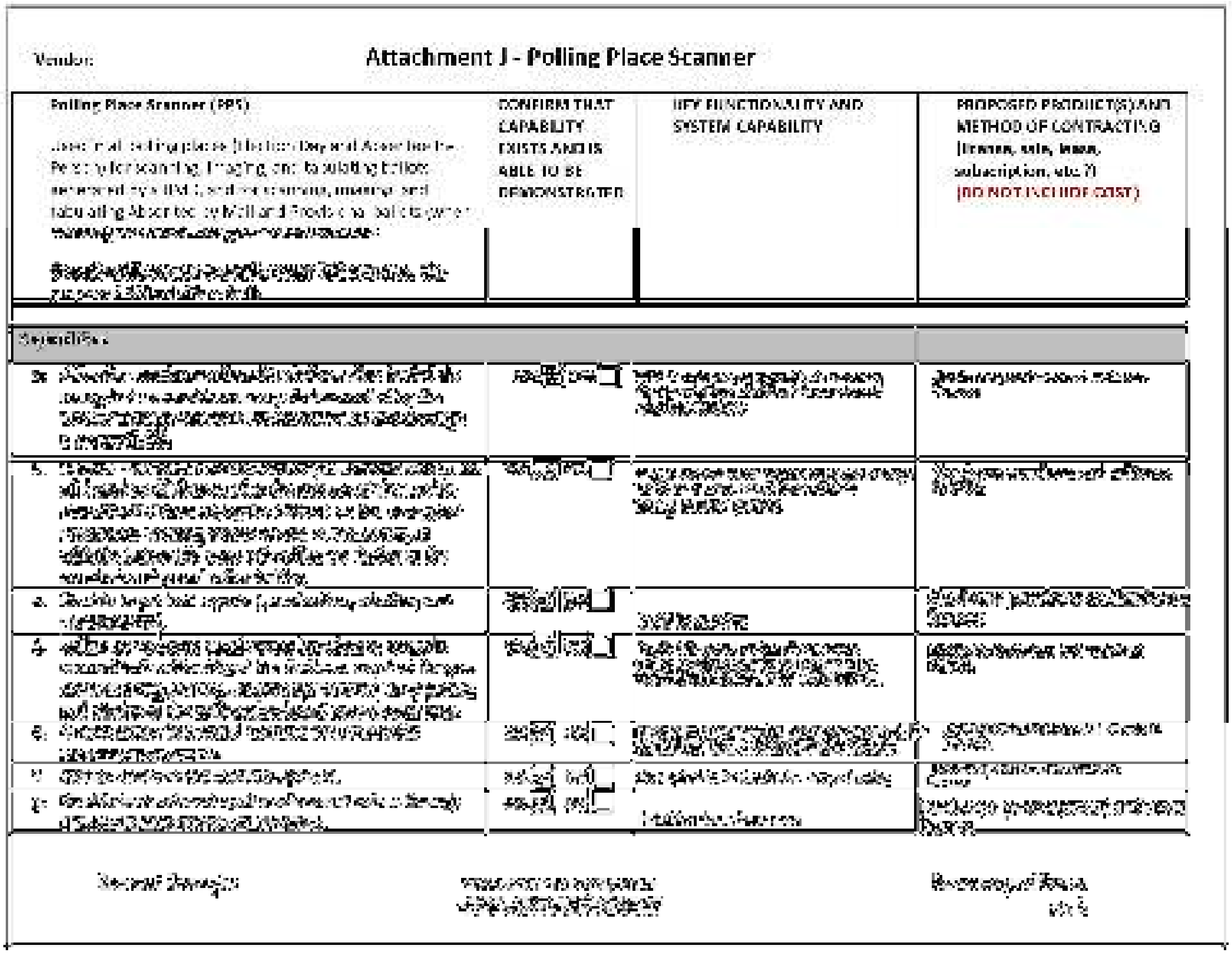
The Election Data Translator application extracts data from a source Excel file, transforms it, and combines it with base election information that is stored in the connected EMS template election project database. At the end of this process, data is imported into the EMS template election project database. Following this, the election project is ready for further processing in Election Event Designer.

In addition to this, the application also has the capability, via the 'Import Mapper' feature to convert well-known election definition formats (usually from other systems/vendors) into the base import excel file format, ready to be imported into the EMS election database.

Section 3 – Polling Place Scanners (PPS)

File 3-1 PPS

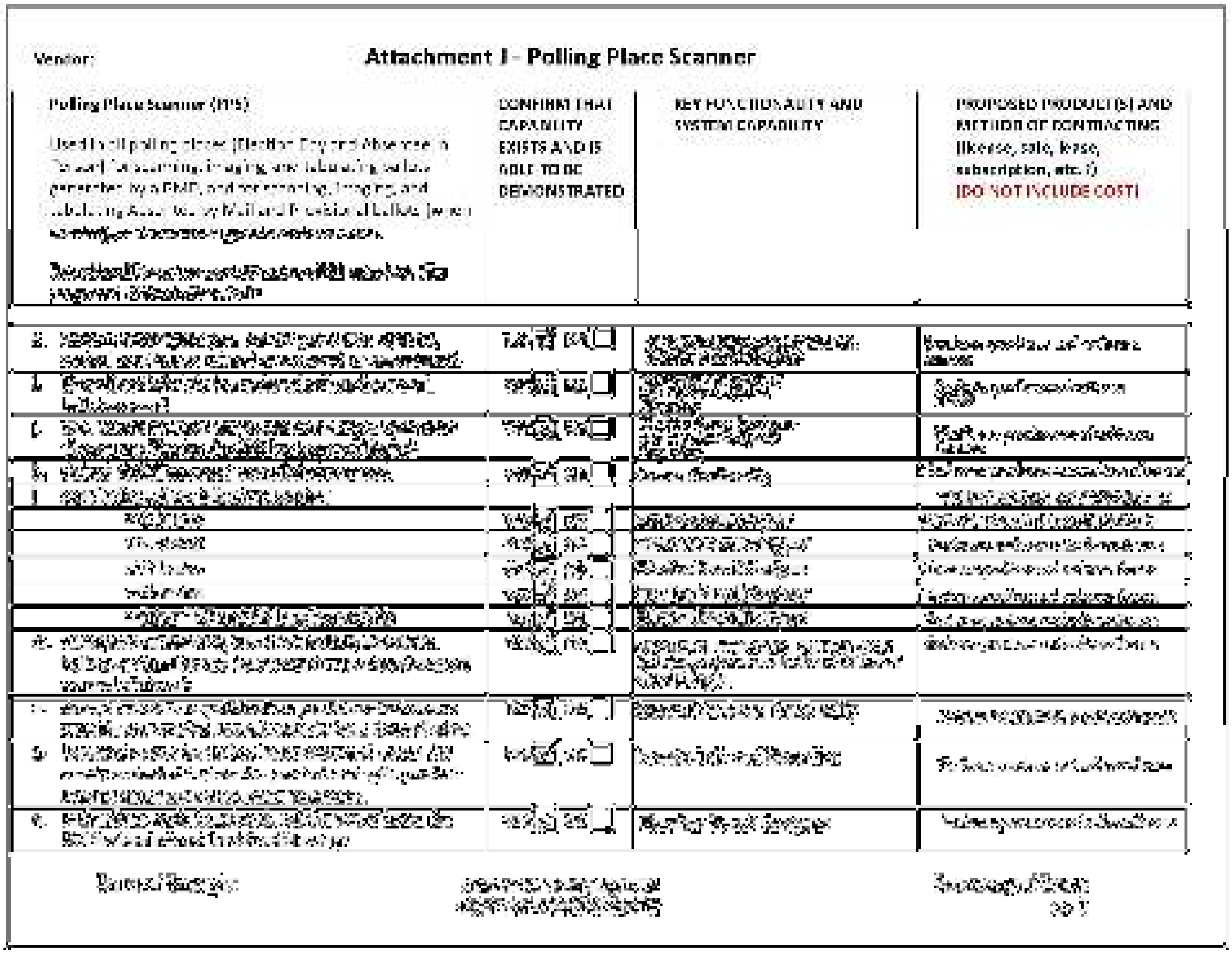
3.1 Complete the attached form titled "Polling Place Scanner" and include narrative.



Vendor:

Attachment J - Polling Place Scanner

Polling Place Scanner (PPS)	CONFIRM THAT CAPABILITY EXISTS AND IS ABLE TO BE DEMONSTRATED	KEY FUNCTIONALITY AND SYSTEM CAPABILITY	PROPOSED PRODUCT(S) AND METHOD OF CONTRACTING (license, sale, lease, subscription, etc.?) (DO NOT INCLUDE COST)



Vendor:

Attachment J - Polling Place Scanner

Polling Place Scanner (PPS) Used in all polling places (Election Day and Absentee in Person) for scanning, imaging, and tabulating ballots generated by a BMD, and for scanning, imaging, and tabulating Absentee by Mail and Provisional ballots (when [illegible] [illegible]	CONFIRM THAT CAPABILITY EXISTS AND IS ABLE TO BE DEMONSTRATED	KEY FUNCTIONALITY AND SYSTEM CAPABILITY	PROPOSED PRODUCT(S) AND METHOD OF CONTRACTING (license, sale, lease, subscription, etc.) (DO NOT INCLUDE COST)
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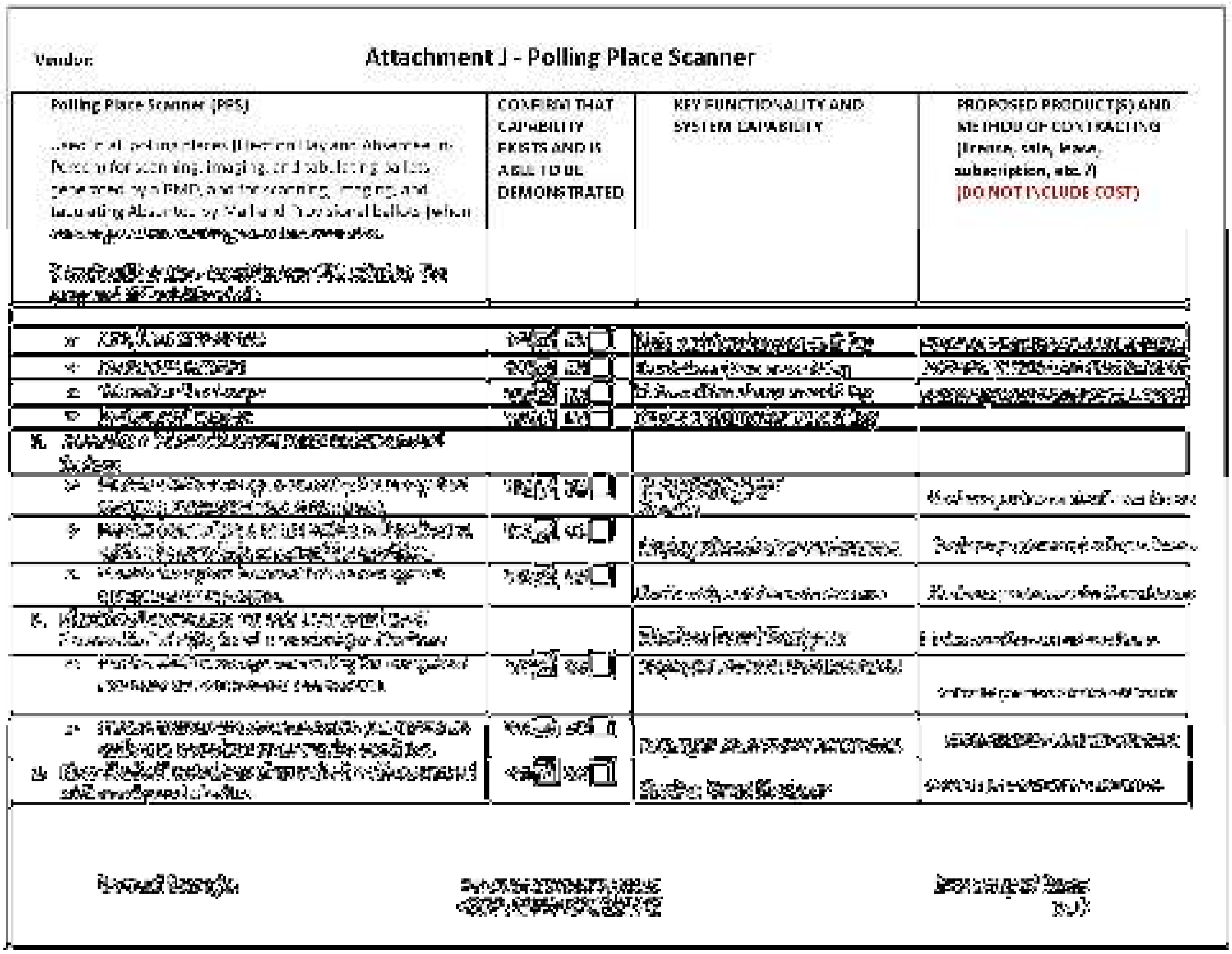

Vendor:

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b. [illegible]	[illegible] ☐	[illegible]	[illegible]
c. [illegible]	[illegible] ☐	[illegible]	[illegible]
d. [illegible]	[illegible] ☐	[illegible]	
[illegible]			
a. [illegible]	[illegible] ☐	[illegible]	[illegible]
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c. [illegible]	[illegible] ☐	[illegible]	[illegible]
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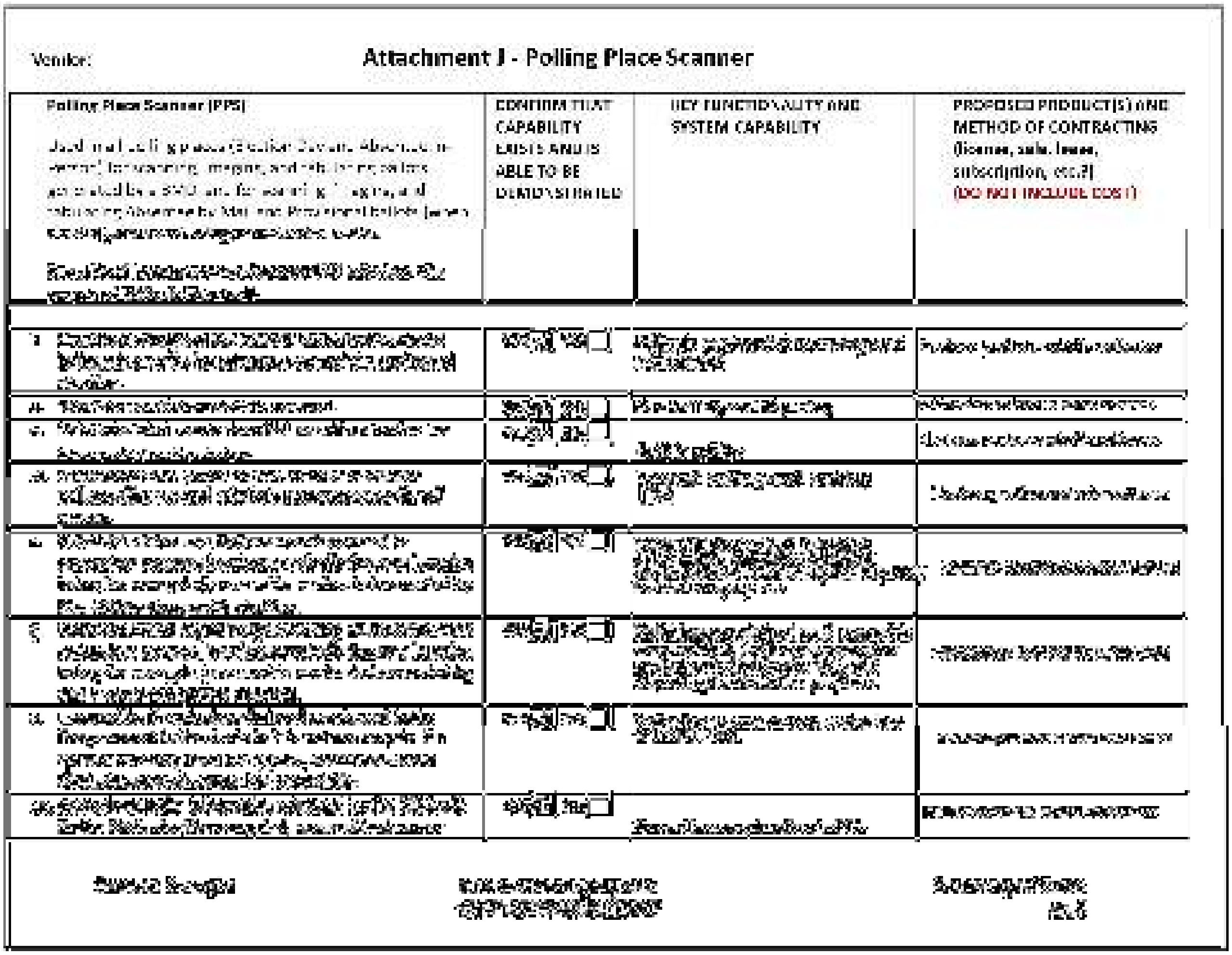

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1. [illegible]	[illegible] ☐	[illegible]	[illegible]
2. [illegible]	[illegible] ☐	[illegible]	[illegible]
3. [illegible]	[illegible] ☐	[illegible]	[illegible]
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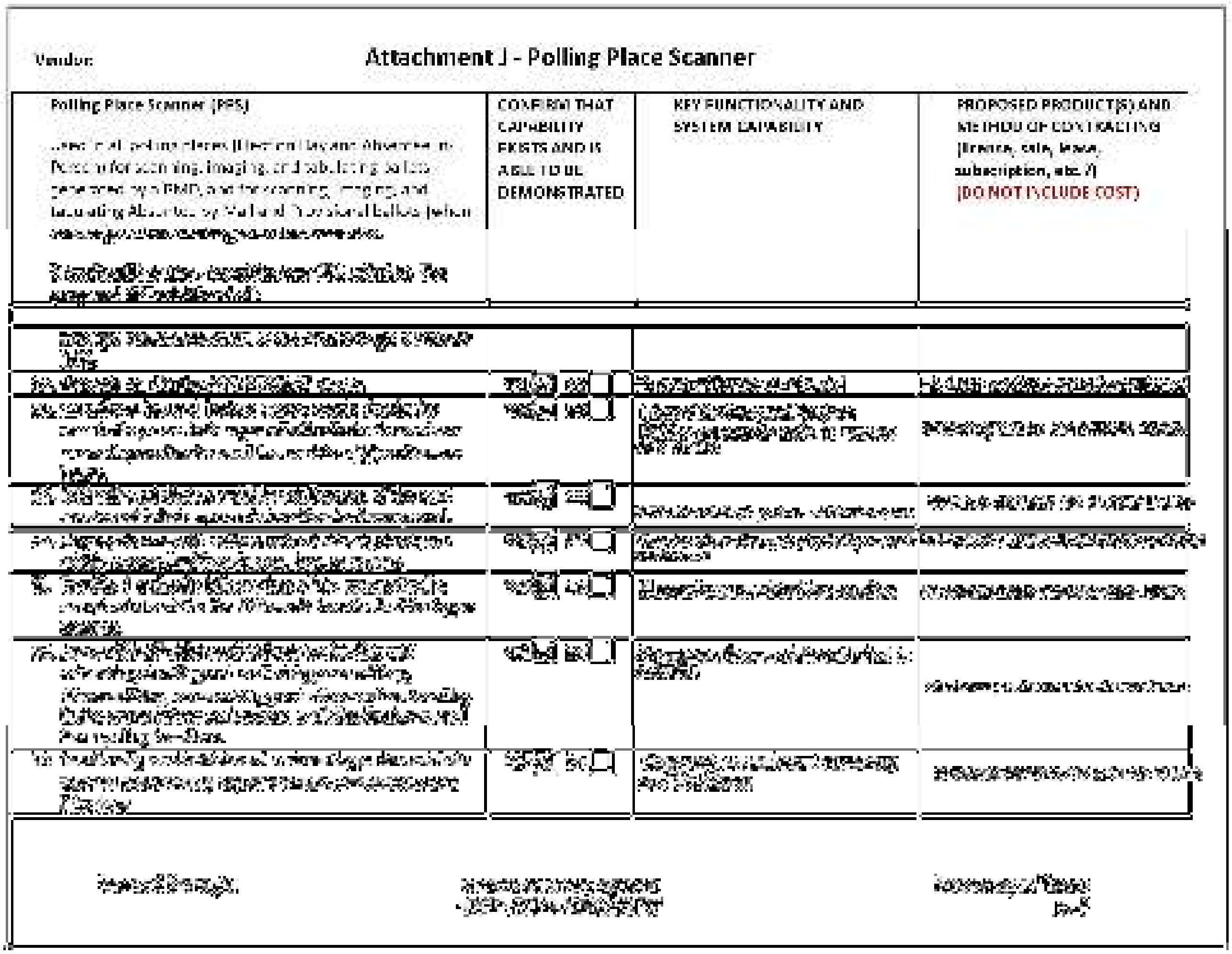

Vendor:

Attachment J - Polling Place Scanner

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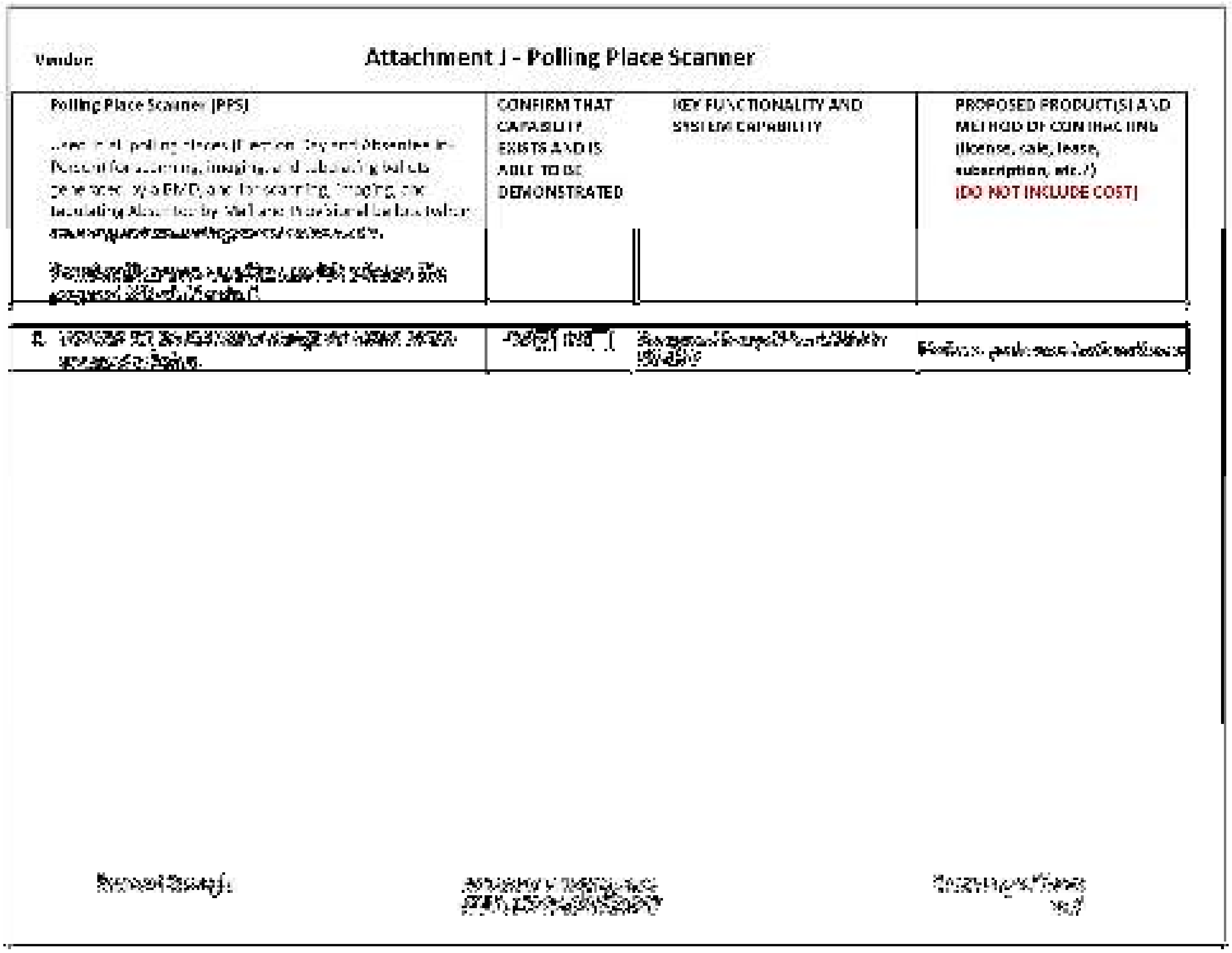

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Attachment J - Polling Place Scanner

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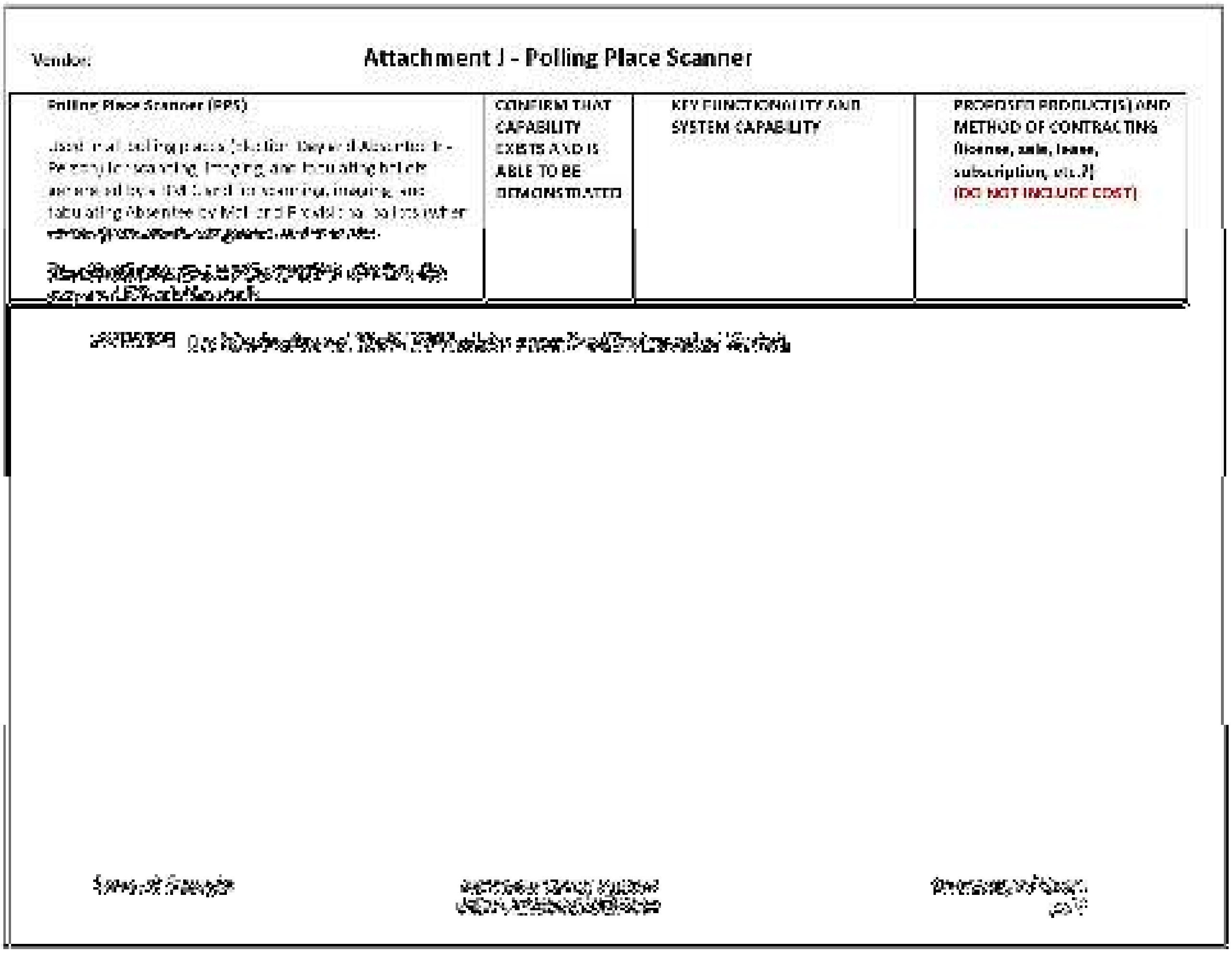
[illegible]	[illegible]	[illegible]	[illegible]



Vendor:

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[illegible]

[illegible] [illegible] [illegible]

The ImageCast Precinct (or ICP) scanner/tabulator is a lightweight, robust and easy-to-use automated paper ballot tabulation system.

The system is designed to scan hand-marked paper ballots, interpret voter marks on the paper ballot and safely store and tabulate each vote from each paper ballot. The ImageCast Precinct reads single and double-sided ballots in four orientations and accepts striping and colored headers to distinguish ballots. Used in conjunction with the required consumables, supplies, and software, the ImageCast Precinct forms a complete tabulation system.

In Democracy Suite 5.5 A, the ImageCast Precinct scanner is also capable of reading and tabulating the choice summary ballots produced by the ImageCast X Prime, which include a 2D barcode read by the scanner, as well as a human-readable text summary of the voter's selections.

The ICP is the most reliable optical scanner ever developed, with major deployments including 82,000 units in the Philippines, 11,000 units in New York, and 2,500 units in Mongolia. Most recently, over 6,000 ImageCast Precinct units were successfully deployed in the Commonwealth of Puerto Rico for their 2016 elections.

The ICP is designed to be "plug and play," making it very straightforward and quick to set up for poll workers. It will power on upon plugging in the AC power cord. The poll worker will apply their iButton security fob and enter their credentials to open the polls and print the zero tape, and the ImageCast Precinct tabulators are ready to commence standard voting and accepting ballots. The Internal Battery will allow voting for up to 2 hours after the loss of power.

ImageCast Precinct

EFFICIENT
Compact, lightweight, easy to store, and low maintenance.
SIMPLE
Easy to use for both voters and poll workers.
SECURE
Meets EAC security standards to preserve integrity and auditability.
ACCESSIBLE
Integrated accessibility options for private and independent voting.

At the polling place, the ICP performs the following functions:

- Scans the ballot
- Interprets the digital image of the ballot and appends to the bottom of the image a record of how that ballot was counted on Election Day (known as the AuditMark image).
- Allows voter to correct any mistakes in marking as monitored by the Dual Threshold mark definition feature set by the State or county.
- Redundantly stores and tallies the results
- Prints cumulative totals of all votes cast after the polls have been closed

The ImageCast Precinct - a lightweight but robust and versatile tabulator

ImageCast Precinct on the Dominion Ballot Box

Storage and Transportation

The ImageCast Precinct comes in a standard packaging including foam inserts for maximum protection. Each box weighs approximately 15 pounds and measures:

H = 7.5 inches

W = 22 inches

D = 19 inches

The accompanying ballot box, with the lid attached weighs approximately 85 pounds and measures:

H = 44 inches

W = 25 inches

D = 38 inches

For optimal product life, storage limitations should adhere to the following specifications:

ImageCast Precinct

- Storage Temperature min/max: From -25°C - 60°C
- Operating and/Storage Conditions (Relative Humidity): From 20% - 80% RH non-condensing
- Place the tabulator inside the re-sealable bag into the provided packaging box with foam inserts to provide vibration and impact protection.
- Store the packaged tabulator box under conditions specified.
- Alternatively, leave the tabulator on the Ballot Box but place the Ballot Box dust cover over it to keep it free from environmental elements.
- Store the tabulator (and Ballot Box, if applicable) in a dust-free, clean environment.
- Perform periodic charging of the back-up battery module for 12 hours every 9 months.
- The tabulators should not be stacked on top of one another for storage unless they are in their respective carrying cases or packaging boxes (Suggested Maximum Stack

  = 4 Boxes High)

Section 3 – Polling Place Scanners (PPS)

File 3-2 PPS Validation

3.2 Describe any software/firmware validation tools built into the device for use in installation, pre-election, and post-election testing to verify that software/firmware has not been modified.

Democracy Suite integrates a role-based access control system for all software and hardware components. Each user accessing the system is the member of one of the predefined or custom-made roles. Each role has its own set of permissions, or actions that users of that role are allowed to perform. This access control approach provides authentication and authorization services and can be granular according to the jurisdiction's needs and organization. Complete user and role membership management is integrated within the Democracy Suite EMS Election Event Designer client module.

Further, the ImageCast Precinct protects against unauthorized access or loading of malicious firmware by requiring two-factor authentication for all technician and pollworker menus. In order to gain access, a user must have a valid iButton and enter an authorized username and password.

As previously detailed, all products in the Democracy Suite platform follow best software and application development practices, including additional source code quality and security procedures. All software programs satisfy recommended coding standards, as well as code styling guidelines as required by EAC VVSG standards. Automated code review processes are in place, that verify compliance with industry accepted coding standards for programming languages. In addition, proper system and software hardening procedures are clearly defined and regularly tested. Testing is performed on the lower source code level using code analysis tools, and at the system level using Nessus vulnerability testing tool. Data integrity and confidentiality is implemented according to NIST defined and FIPS validate procedures and algorithms.

All the code is stored in a secure manner within our organization and regularly backed up. Dominion's IT personnel further improve overall security through the usage of firewalls, intrusion detection/prevention systems, comprehensive employee training, and company-wide security policies. Continuous integration is performed on a daily basis

along with in-depth testing, which maintains constant code quality. Documentation covers recommended secure configuration scenarios from securing host operating systems (by using antivirus software, firewall configuration, hardening scripts, performing regular updates, and being in an isolated environment) through encryption of application communication mechanisms, hard disk encryption, and election file encryption. Voting locations are physically secured by trained professionals, machines (tabulators) are locked down from modification through the use of appropriate seals and are uniquely identifiable by having appropriate certificates stored for use in authentication.

Dominion uses multi-level assurance and quality control processes to ensure that all elements of our integrated voting system perform properly with every use. Internal acceptance testing is performed on each voting system on receipt from the manufacturer. By the time our products are purchased by the customer, they have gone through three full rounds of acceptance testing. Independent reviews of election databases are conducted to prior Logic and Accuracy testing. We recommend (and support our customers to conduct) precinct-level pre-election testing.

In addition to this rigorous testing and control program designed to catch errors, Dominion Voting regularly conducts process audits of our acceptance testing, and programming processes to ensure that errors never occur.

Section 3 – Polling Place Scanners (PPS)

File 3-3 PPS Tabulation

3.3 Describe your PPS' tabulation process.

The ImageCast Precinct can be thought of as a sheet fed scanner. This means that as the paper is pulled through the machine, a complete image is taken of the top and bottom of the ballot. The scanner then passes this image to a software program which looks for markings (black squares which are often called `fiducials') around the ballot. If the correct number of fiducials is found, and the ballot bar code passes checksum logic tests, the software then knows that it is looking at a valid ballot.

Once a ballot is verified, the system begins to interrogate the ballot markings. To begin, the machine integrates every black pixel for each marking area corresponding to a position on the ballot. If the number of black pixels exceeds the threshold marking defined by the jurisdiction, the mark is considered a vote and a digital signal is created. If there is no mark present, an appropriate digital signal is created. For those cases where handwritten or write-in votes are present, the marks are detected and these ballots are placed in the secondary ballot compartment.

The machine is designed so that no ballot is allowed to pass the scanning stage unless:

- The scanner verifies that it is a valid ballot
- The scanner reads all the fiducials around the ballot image.

If, for whatever reason, the machine is unsure about the image, it will notify the operator with an appropriate error message (such as \Ballot Misread," \Please Insert Again," \Invalid ballot for this polling location," \DRO box not signed," etc).

In total, there are approximately 340 image checks that are performed on each image. If any check fails, the machine will report the ballot as misread and automatically reverse it. The system has been designed to have an error rate of less than 1 in 10,000,000 markings.

The imaging system is designed using a narrow paper path. This ensures that folds, creases, and crumpled ballots are imaged without any artifact appearing in the ballot image. If these artifacts appear and affect the image, an error message is given to the operator.

If proper marking devices are used, smudges do not occur. If a voter uses another type of pen, which does not dry before ballot insertion, the leading surfaces of the tabulation units contact the paper and prevent any wet ink or smudges from affecting the imaging of the initial or subsequent ballots.

The ImageCast Precinct allows ballots to be generated with marking positions for Write-Ins, if allowed under election laws, whereby a voter can write-in a candidate's name if that name does not appear on the ballot. When a ballot with Write-In markings is scanned, the ImageCast Precinct will record as many write-in votes as the number of candidates the voter is allowed to select, as per VVSG regulations.

The scanning process consists of real-time monitoring and interrogation of all ballot images before the batches are accepted. In essence, all ballots are scanned and then subjected to image processing, which determines if the ballot is valid and scanned correctly. If any scan fails this interrogation, the scanner ceases operation. It emits an audible and visual notification to the operator, and returns the ballot.

A high-level list of ImageCast Precinct features that support the scanning and tabulation function includes the following:

- Two (2) optical imaging scanners for creating a duplex scanned image of each side of the ballot. Ballots can be fed in all four (4) orientations.
- Linux Operating System.
- Two SD memory cards ports for storage capabilities. Two (2) 8GB SD memory cards will be provided and located behind two securable doors (Administrator Door and Pollworker Door).
- An interactive electronic display in the form of an ultra-high contrast graphical color 5.7” LCD screen, and a built-in touch screen for administration purposes.

- An internal 3” thermal printer and one (1) 3” paper roll for generating reports.
- One (1) administrative security key (iButton) used with an integrated receptacle (physically attached to the top of the unit and electrically connected to the motherboard) used for a variety of verification and security tasks such control, data confidentiality and integrity functions.
- A motorized paper feed mechanism for detecting and moving the ballot within the scanner. Ballots used with the ImageCast Precinct must be 8.5” wide by a variable length (11", 14", 17", 19” and 22"). The paper feed mechanism is physically capable of moving the ballot forward into the machine, across image sensors, enabling complete image capture of both sides of the ballot.
- Power supply module uses 120 Vac, 60 Hz, one phase power. It has a power consumption of 0.07 Amps at 120 Volts AC.
- An internal battery which is rated to provide six (2.5) hours of normal use in the absence of AC power. In addition to internal 2.5 hours battery an internal 6 hours battery option is also available. There is also a connection for an external 12VDC SLA battery.
- Patented functionality known as the AuditMark. For each ballot scanned and accepted into the unit, a corresponding ballot image is created and stored for audit purposes. The image consists of two parts described below:
    - The top portion of the image contains a scanned image of the ballot.
    - The bottom portion consists of a machine-generated text showing each mark that the unit interpreted for that particular ballot. This is referred to as the AuditMark.

Section 3 – Polling Place Scanners (PPS)

File 3-4 PPS Audit

3.4 Describe what functions the PPS provides to assist with post-election audits.

Post election audits are performed in the Results Tally and Reporting module of Democracy Suite. The ImageCast Precinct assists with the overall function of a post-election audit by accurately scanning, imaging both sides of the ballot scanned and tallying all ballots fed through the unit during an election, adding the AuditMark detailing the system interpretation of the voter's intent, and running machine reports included applicable audit logs of all operations performed on the unit. Results are transferred from the ImageCast Precinct's removable flash memory devices to the central processing location for accumulation in the Results Tally and Reporting module.

All images saved with the attached AuditMark details are available for selection, review, edit or adjudication in the audit files selected by the county or state personnel.

Section 3 – Polling Place Scanners (PPS)

File 3-5 PPS Ease of Use

3.5 Ease of Use for Local Election Officials and Voters: Provide and demonstrate customer experiences via referrals and specific case studies or white papers including access, special features, and any other customer feedback.

Dominion works with more than 3,000 entities across North America to provide elections services, software and hardware. We pride ourselves on the partnership that we strive to build with each customer.

In addition to the references we provide in response to 0-7 References, we would like to offer several letters of reference from larger entities that are currently utilizing Democracy Suite and a similar product array as we are proposing in Georgia. Letters from Sacramento County and Contra Costa County, California will provide a high-level overview of the success we have experienced through the implementation and use of our system.

As letters can only provide a snapshot of the user experience, we would also like to provide several links to several testimonial videos produced in conjunction with our customers in the City and County of Denver, and Clark County, Nevada. We feel these video testimonials provide a picture of the type of partnership we commit to developing.

City and County of Denver:

https://www.youtube.com/watch?v=Zyqg-LcAkC0

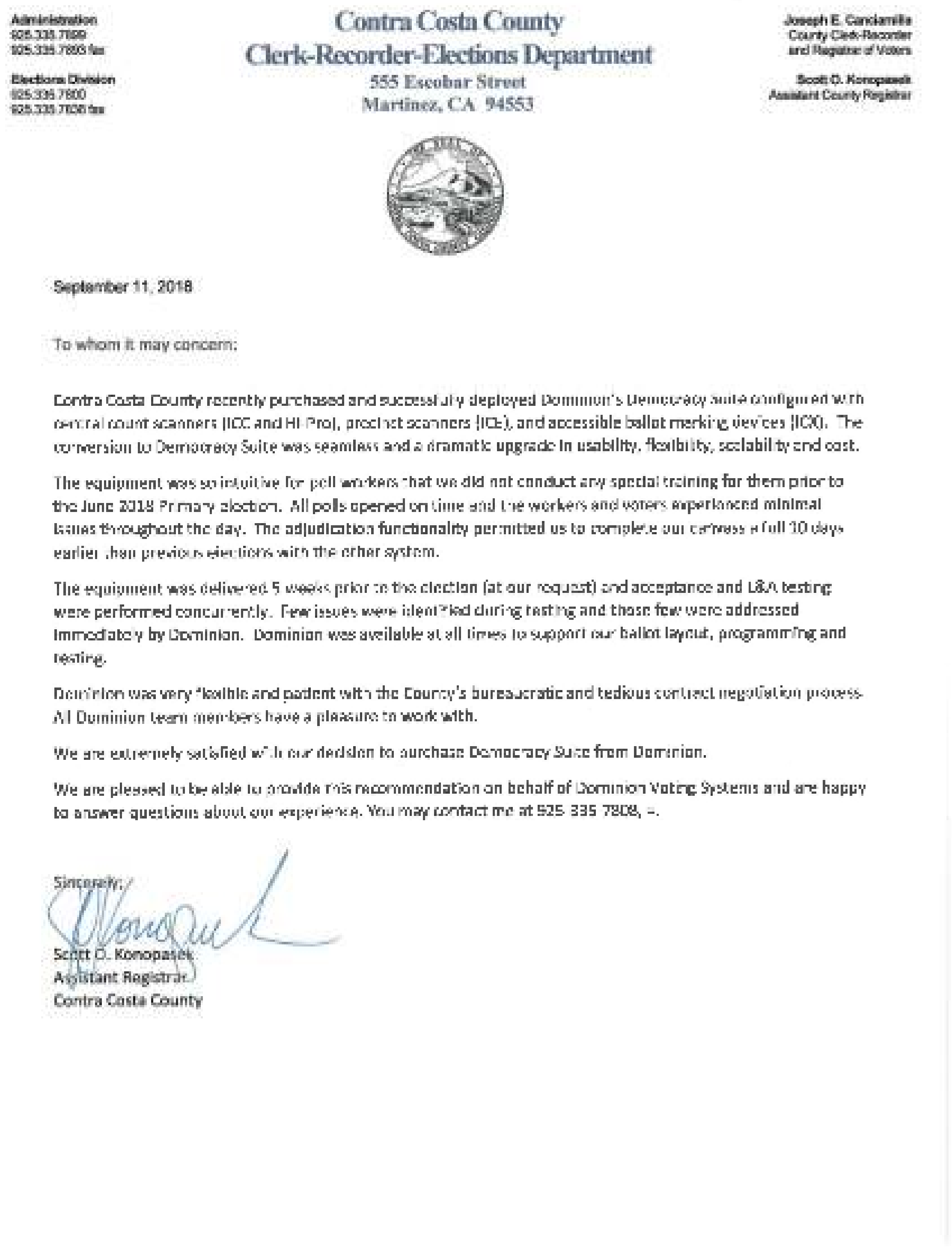
Clark County Video #1 -2018

https://www.youtube.com/watch?v=WejC40bgvic

Clark County Video #2 – 2017

https://youtu.be/j9TsDwsHVPA

Letters of reference provided on the following pages:



Administration
925.335.7899
925.335.7893 fax

Elections Division
925.335.7800
925.335.7836 fax

Contra Costa County
Clerk-Recorder-Elections Department
555 Escobar Street
Martinez, CA 94553

Joseph E. Canciamilla
County Clerk-Recorder
and Registrar of Voters

Scott O. Konopasek
Assistant County Registrar

September 11, 2018

To whom it may concern:

Contra Costa County recently purchased and successfully deployed Dominion's Democracy Suite configured with central count scanners (ICC and HiPro), precinct scanners (ICE), and accessible ballot marking devices (ICX). The conversion to Democracy Suite was seamless and a dramatic upgrade in usability, flexibility, scalability and cost.

The equipment was so intuitive for poll workers that we did not conduct any special training for them prior to the June 2018 Primary election. All polls opened on time and the workers and voters experienced minimal issues throughout the day. The adjudication functionality permitted us to complete our canvass a full 10 days earlier than previous elections with the other system.

The equipment was delivered 5 weeks prior to the election (at our request) and acceptance and L&A testing were performed concurrently. Few issues were identified during testing and those few were addressed immediately by Dominion. Dominion was available at all times to support our ballot layout, programming and testing.

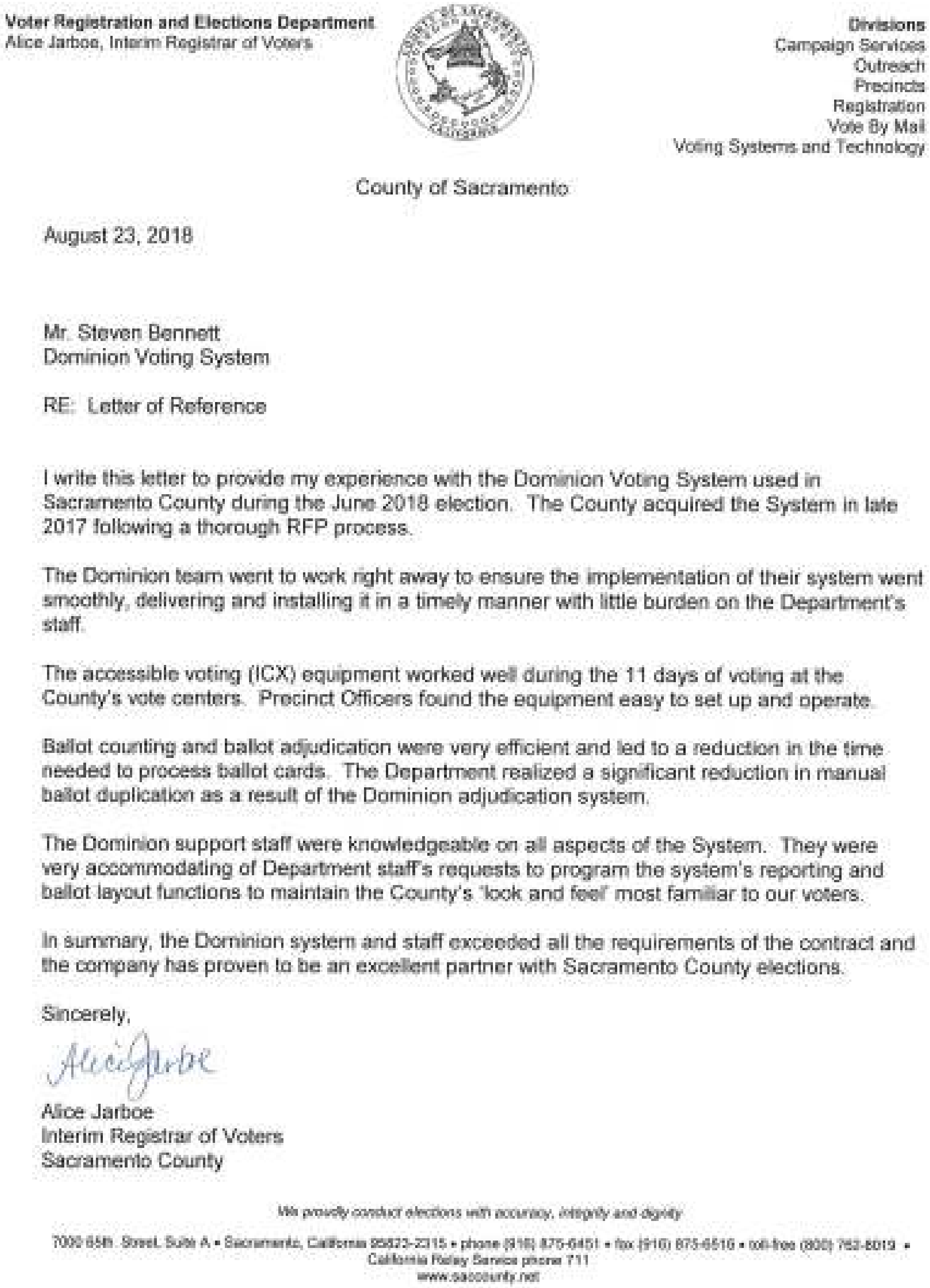
Dominion was very flexible and patient with the County's bureaucratic and tedious contract negotiation process. All Dominion team members have a pleasure to work with.

We are extremely satisfied with our decision to purchase Democracy Suite from Dominion.

We are pleased to be able to provide this recommendation on behalf of Dominion Voting Systems and are happy to answer questions about our experience. You may contact me at 925-335-7808, =.

Sincerely,

Scott O. Konopasek
Assistant Registrar
Contra Costa County



Voter Registration and Elections Department
Alice Jarboe, Interim Registrar of Voters

Divisions
Campaign Services
Outreach
Precincts
Registration
Vote By Mail
Voting Systems and Technology

County of Sacramento

August 23, 2018

Mr. Steven Bennett
Dominion Voting System

RE: Letter of Reference

I write this letter to provide my experience with the Dominion Voting System used in Sacramento County during the June 2018 election. The County acquired the System in late 2017 following a thorough RFP process.

The Dominion team went to work right away to ensure the implementation of their system went smoothly, delivering and installing it in a timely manner with little burden on the Department's staff.

The accessible voting (ICX) equipment worked well during the 11 days of voting at the County's vote centers. Precinct Officers found the equipment easy to set up and operate.

Ballot counting and ballot adjudication were very efficient and led to a reduction in the time needed to process ballot cards. The Department realized a significant reduction in manual ballot duplication as a result of the Dominion adjudication system.

The Dominion support staff were knowledgeable on all aspects of the System. They were very accommodating of Department staff's requests to program the system's reporting and ballot layout functions to maintain the County's 'look and feel' most familiar to our voters.

In summary, the Dominion system and staff exceeded all the requirements of the contract and the company has proven to be an excellent partner with Sacramento County elections.

Sincerely,

Alice Jarboe

Alice Jarboe
Interim Registrar of Voters
Sacramento County

We proudly conduct elections with accuracy, integrity and dignity

7000 65th Street, Suite A • Sacramento, California 95823-2315 • phone (916) 875-6451 • fax (916) 875-6516 • toll-free (800) 762-8019 •
California Relay Service phone 711
www.saccounty.net

Section 3 – Polling Place Scanners (PPS)

File 3-6 PPS Capacity

3.6 Ballot Scanning Capacity: Provide the number of ballots that can be held by the ballot box to which the proposed PPS would be connected. Specify capacity by ballot size dimensions.

Dominion has designed an innovative ballot box that includes a custom secure top which protects the precinct scanner while in transport and storage and makes it quite easy for the poll worker to roll the plastic ballot box into position in the poll and remove the top. The ballot box is built of sturdy plastic and features four large lockable swivel wheels and handles on all sides for ease of movement in storage or at the poll for poll workers to maneuver the ballot box to the desired location. The ImageCast Precinct (ICP) scanner may be securely attached to the lid for transporting to and from the polling place allowing room to store some precinct supplies inside the ballot box.

Two removable bins are included with the ballot box. One is a write-in bin which collects ballots containing write-ins so poll workers do not have to sort through all the ballots looking for ballots containing write-in votes. The other bin is for collection of emergency ballots if power is lost during the voting period, or if the in-precinct scanner is not working properly. In this case, poll workers will advise the voters to deposit their ballots into the emergency bin until such time as the scanner is working.

The clam shell cover provides a protective, secure, non-accessible condition in case the scanner and ballot box remain overnight in an Early Voting setting or the system is delivered to the polling place in advance of the poll workers arriving and having access to the device.

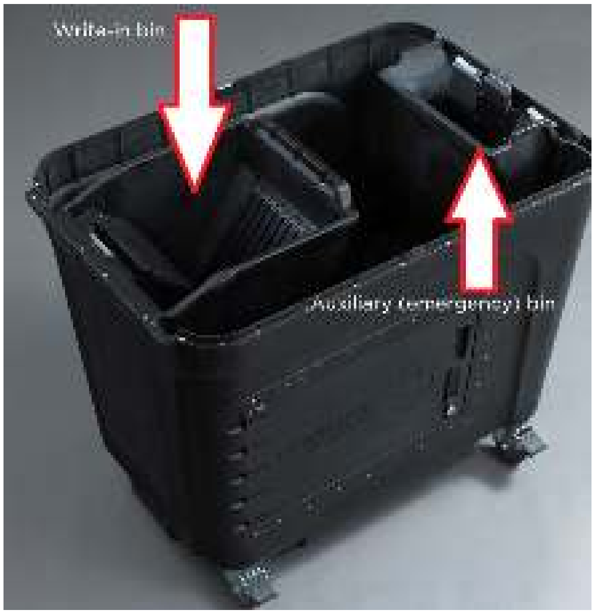
In many cases, we understand the poll workers may be asked to pick up the ImageCast Precinct scanner and deliver it to the poll and then attach the ImageCast Precinct to the ballot box lid as part of the *Open the Poll* procedures. Since the ballot box has no internal moving parts, the ballot box can also accommodate delivery of Election Day supplies inside the box. Security is enhanced as the ballot box features five locks and multiple security seal points to limit access and prevent tampering.

When the poll worker arrives to set up the polling site equipment and other items, they will be trained to unlock the cover, plug the ballot box power cord into the wall plug and the system will automatically turn on and perform diagnostic routines. Immediately following the completion of the diagnostic tests, the ImageCast Precinct will print the zero tape or tapes as required.

The Dominion plastic ballot box is:

- Built to the requirements of the EAC, the ballot box capacity is sized to US polling place requirements, with three bins (main bin, write-in bin, and auxiliary/emergency bin).
- Capacity will vary based on ballot length and weight and is approximately:
  - Main compartment: 1500 22" ballots
  - Secondary compartment (default diverted): 200 ballots
  - Auxiliary compartment: 150 ballots
- The tabulator locks and seals onto the ballot box, which features a cover that provides additional security and ease of transportation.
- Features a sealed plastic base and is water resistant.
- Offers multiple deployment and warehousing options, including the possibility of nesting the boxes up to three units deep.

The ballot box is designed to fit through standard doorframes, and its overall size is 27" (W) by 58" (D) by 48" (H). It weighs 85 pounds.



Ballot Box Compartment Bins from above

ImageCast Precinct on top of ballot box

Ballot Box with Attached Security Lid

Ballot Box

Unlocking the ballot box

Retrieving ballots from the ballot box

As an alternative, Dominion can also offer a collapsible ballot box that has a similar capacity as the rolling ballot box detailed above. We would be happy to provide additional information on this option to suit the specific needs of the Counties.

Collapsible ballot box with attached ImageCast Precinct

Section 3 – Polling Place Scanners (PPS)

File 3-7 PPS Environment

3.7 Describe how the proposed PPS handles adverse environmental and physical ballot conditions (i.e. water, humidity, bent or torn ballots, etc.).

Non-typical voting scenarios include ballots that are damaged to the point the unit cannot read the ballot. In cases of an invalid, defective or “mis-read” ballot, the ImageCast Precinct tabulator will reject the ballot and a poll worker can assist the voter in activating the ImageCast X BMD a second time marking the original damaged ballot as spoiled and allow the voter to remark a ballot. The ImageCast Precinct can be programmed to respond in the following manner

- Automatically reverse ballot
- Prompt voter
- Prompt Voter with a confirmation

Ultimately, the process will be determined by jurisdictional rules.

Section 3 – Polling Place Scanners (PPS)

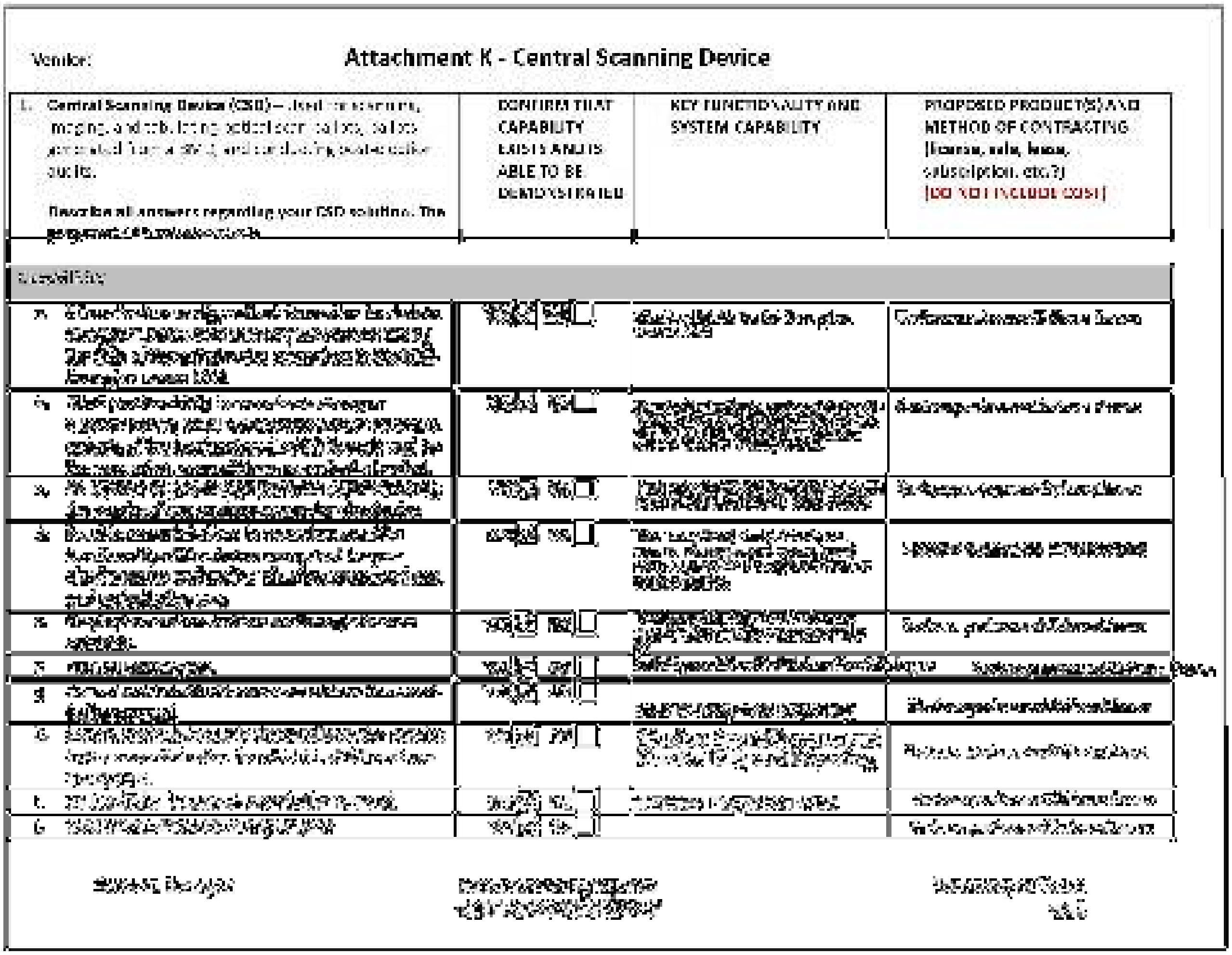
File 3-8 PPS ADA

3.8 Describe how the proposed PPS will support ADA accessibility for scanning ballots.

The ImageCast Precinct is not being proposed as an accessible voting device. Dominion's proposed solution for accessible voting is the ImageCast X voting unit. Please refer to the sections detailing the ImageCast X BMD Accessibility features.

File 4-1 CSD

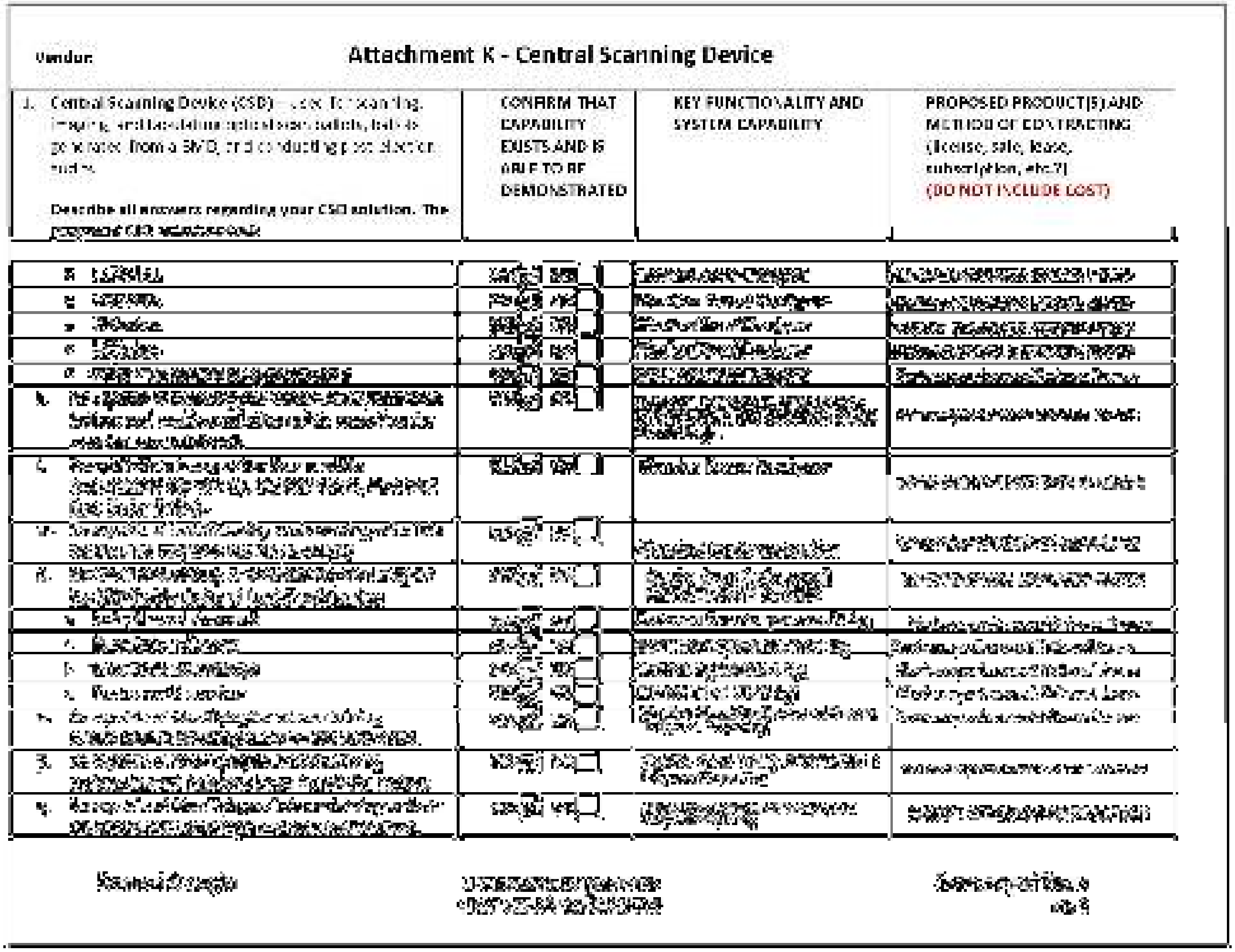
4.1 Complete the attached form titled "Central Scanning Device" and include narrative.



Vendor:

Attachment K - Central Scanning Device

1. Central Scanning Device (CSD) – Used for scanning, imaging, and tabulating absentee ballots, ballots generated from a BMD, and conducting post-election audits. Describe all answers regarding your CSD solution. The [illegible]	CONFIRM THAT CAPABILITY EXISTS AND IS ABLE TO BE DEMONSTRATED	KEY FUNCTIONALITY AND SYSTEM CAPABILITY	PROPOSED PRODUCT(S) AND METHOD OF CONTRACTING (license, sale, lease, subscription, etc.?) [DO NOT INCLUDE COST]



Vendor:

Attachment K - Central Scanning Device

1. Central Scanning Device (CSD) – used for scanning, imaging, and tabulating optical scan ballots, ballots generated from a BMD, and conducting post-election audits. Describe all answers regarding your CSD solution. The [illegible]	CONFIRM THAT CAPABILITY EXISTS AND IS ABLE TO BE DEMONSTRATED	KEY FUNCTIONALITY AND SYSTEM CAPABILITY	PROPOSED PRODUCT(S) AND METHOD OF CONTRACTING (license, sale, lease, subscription, etc.?) (DO NOT INCLUDE COST)

Vendor:

Attachment K - Central Scanning Device

1. Central Scanning Device (CSD) – Used for scanning, imaging, and tabulating central count ballots, ballots returned from a UMC and conducting post-election audits. Describe all answers regarding your CSD solution. The [illegible]	CONFIRM THAT CAPABILITY EXISTS AND IS ABLE TO BE DEMONSTRATED	KEY FUNCTIONALITY AND SYSTEM CAPABILITY	PROPOSED PRODUCT(S) AND METHOD OF CONTRACTING (license, sale, lease, subscription, etc.?) (DO NOT INCLUDE COST)
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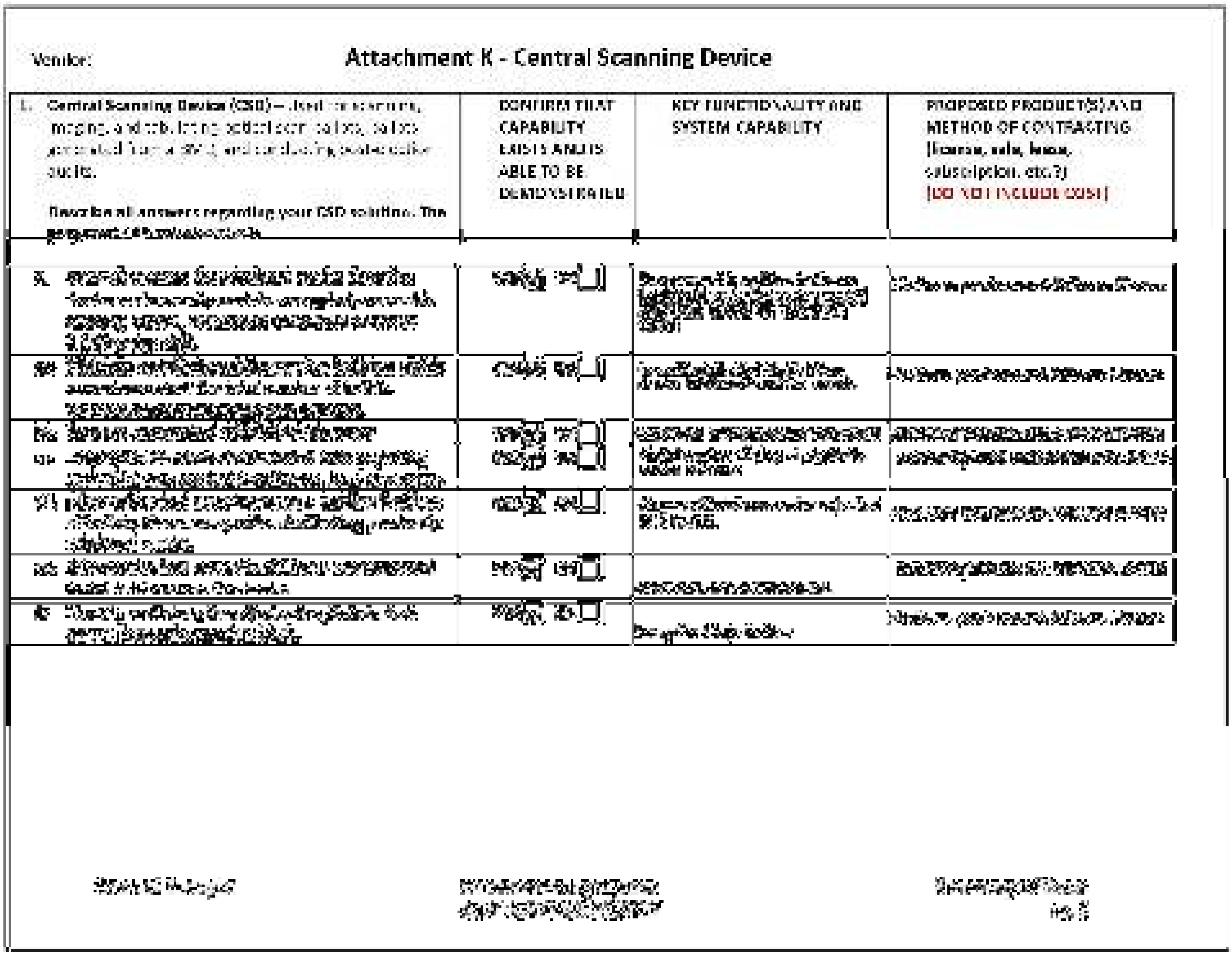
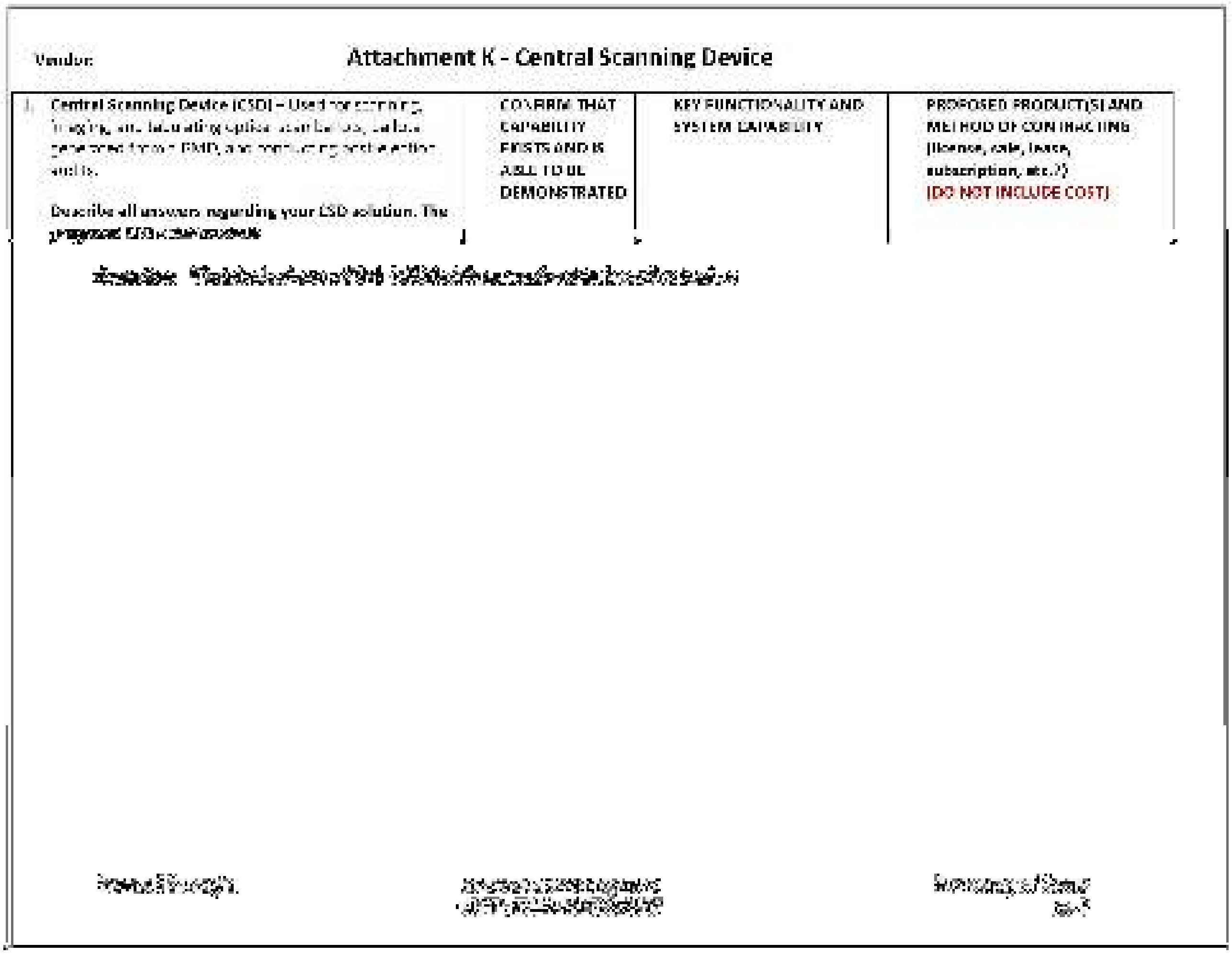


Vendor:

Attachment K - Central Scanning Device

1. Central Scanning Device (CSD) – Used for scanning, imaging, and tabulating optical scan ballots, ballots generated from a BMD, and conducting post-election audits. Describe all answers regarding your CSD solution. The	CONFIRM THAT CAPABILITY EXISTS AND IS ABLE TO BE DEMONSTRATED	KEY FUNCTIONALITY AND SYSTEM CAPABILITY	PROPOSED PRODUCT(S) AND METHOD OF CONTRACTING (license, sale, lease, subscription, etc.?) (DO NOT INCLUDE COST)



Vendor:

Attachment K - Central Scanning Device

1. Central Scanning Device (CSD) – Used for scanning, imaging, and tabulating optical scan ballots, ballots generated from a BMD, and conducting post-election audits. Describe all answers regarding your CSD solution. The proposed CSD [illegible]	CONFIRM THAT CAPABILITY EXISTS AND IS ABLE TO BE DEMONSTRATED	KEY FUNCTIONALITY AND SYSTEM CAPABILITY	PROPOSED PRODUCT(S) AND METHOD OF CONTRACTING (license, sale, lease, subscription, etc.?) (DO NOT INCLUDE COST)

[illegible]

[illegible]

Dominion’s ImageCast Central, like all of our ImageCast products, stores the ballot image with the secure AuditMark. The system’s flexibility allows the jurisdiction to customize outstacking conditions, such as overvotes, undervotes, marginal marks, and certified write-in contests. The ImageCast Central has all the tools election officials are looking for to make their central count process easy and more efficient.

Jurisdictions can add ImageCast Central units to maintain efficiency while remaining cost-effective.

Dominion’s ImageCast Central solution consists of commercially-available-off-the-shelf components. This allows Dominion to focus on software and increase efficiencies of the vote tabulation process. There are several options of hardware including the Canon DR-G1130, which is a solid, consistent scanner which scans ballots 8.5” by 11” and up to 22”. For smaller precincts, the Canon M160ii can be deployed, which can also run ballots that are 8.5” by 11” and up to 22”. All the Dell computer hardware is specified through certification.

Easy to Use

The software is intuitive and requires minimal training for users. It is simple – the operator loads the batch into the scanner and presses *Scan*. When complete, the operator presses the *Accept* button and moves onto the next batch. The operator does nothing but process the ballots. The system’s intelligence does the rest. Along with the requisite COTS hardware, the ImageCast Central provides ample flexibility to meet the needs of small, medium, and larger jurisdictions. ImageCast Central allows jurisdictions to consolidate results in an efficient environment, in real time.

Flexible and Scalable Solution

Along with the requisite COTS hardware, the ImageCast Central provides ample flexibility to meet the needs of small, medium, and large jurisdictions. ImageCast Central allots jurisdictions to consolidate results in an efficient environment, in real time.

Better Scan Reliability

This use of less expensive and compact third-party devices enables the ImageCast Central count solution to offer higher sustained throughputs in the face of hardware failures, flexible site layouts when space is at a premium, and access to a vast pool of readily available replacement parts and certified technicians. Additionally, these units have minimal moving parts, which increases the reliability. A simple microfiber towel is all you need to clear the dust and particles left by paper ballots. The uptake rollers and be easily removed for cleaning or replacement. All of these factors translate to improved maintainability, and lower cost of ownership.

The ImageCast Central has a proven track record of being able to scan ballots in real- life ballot scenarios, such as folded ballots, and ballots that have been crushed, stained or are dirty. Customers have noted that this has significantly reduced the number of ballots that need to be hand duplicated before being processed through the system. The Canon scanner features a simple paper path, limiting the number of paper jams. There is no pre-sorting of ballots or re-orientation of ballots needed before scanning.

Programming the ImageCast Central

Central scanning is typically used to process absentee or mail-in ballots. The election definition is taken from EMS, using the same database that is utilized to program any precinct scanners for a given election. Multiple ImageCast Central scanners can be programmed for use in an election. The ImageCast Central application is installed and later initialized on a computer attached to the central count scanner. Ballots are processed through the central scanner(s) in batches based on jurisdictional preferences and requirements.

Results from the ImageCast Central

The ImageCast Central stores ballot images by scanned batches. The scanned ballot images are migrated to the Election Management System through computer internal secure LAN networking or removable media. As with results data from any precinct scanners in use for an election, Results Tally and Reporting is the portion of EMS that processes the images to provide tabulation and operational reports to the jurisdiction.

Batches can be appended, deleted, and processed in a number of ways to suit typical election workflows, intake of ballots before, during, and after Election Day, jurisdictional requirements surrounding absentee ballot tabulation, and canvassing needs. The ImageCast Central also features all of the technological advances present in the precinct-level tabulators – the AuditMark and the Dual Threshold technology.

Section 4 – Central Scanning Device

File 4-2 CSD Tabulation

4.2 Describe your CSD's tabulation process.

Paper Feed Mechanism

The ballot feed mechanism on the Canon DR-G1130 is intended to handle ballot sizes of 8.5” to 22”. The ballot feed mechanism on the Canon DR-M160II can also handle ballot sizes of 8.5” to 22”. The paper feed mechanism is physically capable of moving the ballot paper forward into the machine and across two image sensors (one on top, one on the bottom). These sensors provide image captures of both sides of the ballot.

The basic design of the scanners consists of separate upper and lower imaging surfaces (known as upper and lower units). These surfaces open up for convenient cleaning, maintenance and freeing of ballot jams. Pickup and drive rollers are located on the upper surface, and retard rollers are located on the lower surface. The continuous movement of the upper and lower surfaces minimize the number of ballot jams. The stepper motor torque and the paper feed mechanism's forces of friction have been optimized so that over-torque (where the ballot can tear) or under-torque (where the ballot can become stuck in the machine) do not occur.

Ballot Insertion and Capacity

An automatic document feeder is used to insert ballots. The DR-G1130 has a feeder capacity of 500 sheets. The DR-M160II has a feeder capacity of 60 sheets. Each feeder can also be operated in manual mode where one sheet is fed at a time.

When the ballots to be scanned are placed on the hopper, a sensor will detect that there is paper ready to be scanned. The operator initiates the scan using the ICC application. The scanner will then begin processing ballots automatically.

If there are no defective ballots, scanned images of all the processed ballots will have passed the quality checks and are ready for tabulation.

Multiple Sheet Detector

The ultrasonic double-feed sheet detector of each unit monitors if more than one sheet of paper is in the transport at one time, and will prevent the unit from counting marking positions from two ballots at the same time. Detection is based on an ultrasonic probe that is immune to ink markings on the ballot, as well as the thickness of paper.

Diagnostic Tests

An automated test that performs a diagnostic check and formal report on the system, including:

- Detecting and reporting the system's status and degree of operability
- Confirmation that there are no hardware or software failures
- Identification of the software release
- Status of all data paths and memory locations to be used in vote recording to protect against contamination of voting data
- Other information needed to confirm the readiness of the equipment and to accommodate administrative reporting requirements
- Confirmation that the device is ready for the poll to be opened
- Upon conclusion of the tests, the software provides evidence in the audit record that the test data has been expunged.

The central scanning devices also perform a set of diagnostic tests after every power on/off cycle. Some of these tests require operator intervention and some are fully automated. At the end of the diagnostics process, the system generates a report with the system status information.

For network applications and user interfaces, Democracy Suite EMS Results Tally & Reporting has the ability to generate a zero-state report before the system is utilized. This report extracts all the relevant counters from the database which should be zero before the central scanning process is started. Electoral officers can use this report not only to check that all candidates have no votes, but also to check that the lists of elections and associated candidates are correct.

The EMS system also executes a security report which creates a list of all terminals, workstations, central scanning devices and all authenticated operators within the system.

“Election Run” Mode functionality

During scanning, all ballot batches are placed on the ballot entry tray. Upon initiating a scan, the tabulator pickup roller grabs one ballot at a time and moves the paper over both scanning read heads (thus acquiring a complete image of both sides of the ballot). The ballot is then analyzed and defined as one or more of the following:

- Fully and properly marked ballot
- Misread ballot or invalid ballot
- Blank ballot
- Overvoted ballot
- Undervoted ballot
- Write-in ballot
- Ambiguous voting mark
- Ballot not linked to the current poll ID
- Ballot to which the write-in precedence rule was applied
- Overvoted party preference
- Unvoted party preference
- Cross-voted ballot
- Major overvote
- Major undervote
- Major overvoted rank
- Major inconsistent rank

- Major duplicate candidate rank
- Major skipped rank
- Major unvoted ranked contest
- Major unused rank
- Overvoted rank
- Inconsistent rank
- Duplicate candidate rank
- Skipped rank
- Unvoted ranked contest
- Unused rank

Ballot Scanning Errors

The following will halt the scanning process.

- Misread or Invalid ballot: A ballot that cannot be processed by the tabulator for whatever reason. This includes legitimate ballots that have been mis-scanned, foreign pieces of paper, or blank pages.

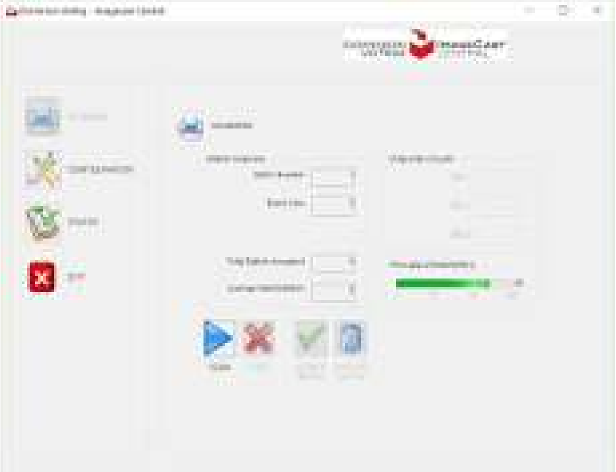
- Multiple sheet warning: If more than one (overlapping) ballot is fed into the scanner at the same time.

When the offending ballot has been located in the ballot exit tray, it is removed for resolution. In addition, the scanners may be configured to halt on additional error conditions (i.e. overvotes, undervotes, blank ballots, etc.).

Scanning a Batch

The ImageCast Central allows the user to easily scan and manage ballots. Below we provide details on the steps needed to scan a batch of ballots.

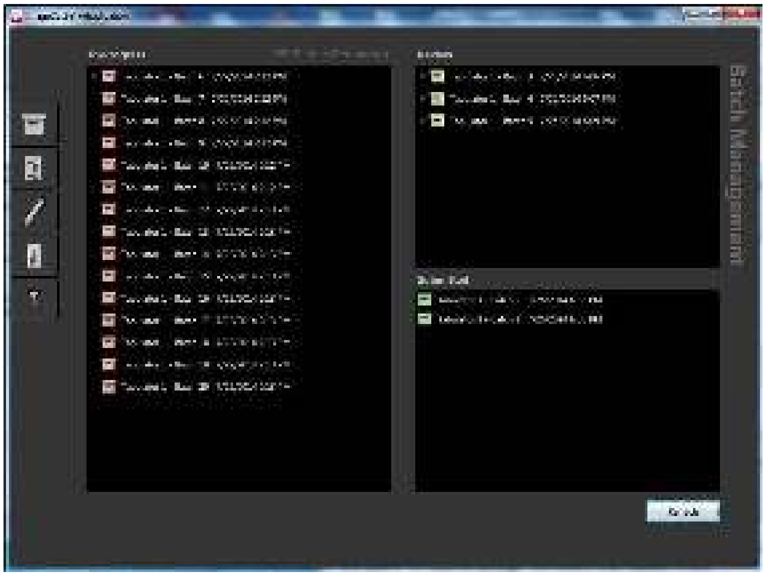
1. Load ballots on the scanner input tray
2. Click “Scan” on the workstation screen
3. Remove ballots form the output tray
4. Click “Accept Batch” on the workstation screen



Tracking and Managing Batches

Batches that do not have any outstack conditions are routed to the Results Tally and Reporting module for tabulation. Batched containing ballots with outstack conditions are routed to the Adjudication stations for further scrutiny.

Adjudication Administrators have the ability to track and review what batches are in adjudication (In Progress pane), which batches are ready for review (review pane) and which batches have been submitted to tally (Submitted pane), as seen in the screenshot below. The Adjudication Administrator can see at a glance how many ballots remain to be adjudicated.



Tabulating

Results Tally and Reporting (RTR) module allows for the upload of results files from in-person and central tabulation equipment. The consolidated results are verified, tabulated and published. RTR offers maximum flexibility to create predefined reports, in addition to a variety of standard Election Day reports including election summary, Statement of Votes Cast, Cards Cast and RCV round by round report. RTR also houses the algorithm for Ranked Choice Voting contests. Results files may be automatically uploaded to Results Tally and Reporting and consolidated results are available for verification prior to publishing.

An additional efficiency built into the Democracy Suite RTR module is that reports can be generated as ballot processing continues uninterrupted. Under legacy systems, pulling reports causes a disruption to ballot processing. This efficiency enables Counties to better respond to the community requests for real time election data; results are instantaneous.

- Once data is uploaded, the County will store all log files, data, and images.
- All data is reviewed, and published, then reported. These checks and balances occur prior to publication, thus reducing errors and increasing transparency.
- Reporting options are highly flexible. Counties can choose to complete a normal, standard based report, or on-the-fly election reports that are highly customizable, that

can meet any of the needs of the office and its constituents. Democracy Suite has the flexibility to output data in many common file formats such as excel, pdf, html, CSV and XML.

Section 4 – Central Scanning Device

File 4-2 CSD Tabulation

4.2 Describe your CSD's tabulation process.

Paper Feed Mechanism

The ballot feed mechanism on the Canon DR-G1130 is intended to handle ballot sizes of 8.5” to 22”. The ballot feed mechanism on the Canon DR-M160II can also handle ballot sizes of 8.5” to 22”. The paper feed mechanism is physically capable of moving the ballot paper forward into the machine and across two image sensors (one on top, one on the bottom). These sensors provide image captures of both sides of the ballot.

The basic design of the scanners consists of separate upper and lower imaging surfaces (known as upper and lower units). These surfaces open up for convenient cleaning, maintenance and freeing of ballot jams. Pickup and drive rollers are located on the upper surface, and retard rollers are located on the lower surface. The continuous movement of the upper and lower surfaces minimize the number of ballot jams. The stepper motor torque and the paper feed mechanism's forces of friction have been optimized so that over-torque (where the ballot can tear) or under-torque (where the ballot can become stuck in the machine) do not occur.

Ballot Insertion and Capacity

An automatic document feeder is used to insert ballots. The DR-G1130 has a feeder capacity of 500 sheets. The DR-M160II has a feeder capacity of 60 sheets. Each feeder can also be operated in manual mode where one sheet is fed at a time.

Customers may elect any quantity of batch size that makes the scanning process efficient for them. The county user may default to batch sizes of 150 ballots because that quantity makes the task of adjudicating ballots that have been flagged for review within a batch easier to manage. Batches maybe rerun without jeopardizing the other batches previously committed and ready for upload. In conclusion, we will work with each county to develop the processes and procedures regarding the central tabulation of ballots that works best for them.

When the ballots to be scanned are placed on the hopper, a sensor will detect that there is paper ready to be scanned. The operator initiates the scan using the ICC application. The scanner will then begin processing ballots automatically.

If there are no defective ballots, scanned images of all the processed ballots will have passed the quality checks and are ready for tabulation.

Multiple Sheet Detector

The ultrasonic double-feed sheet detector of each unit monitors if more than one sheet of paper is in the transport at one time, and will prevent the unit from counting marking positions from two ballots at the same time. Detection is based on an ultrasonic probe that is immune to ink markings on the ballot, as well as the thickness of paper.

Diagnostic Tests

An automated test that performs a diagnostic check and formal report on the system, including:

- Detecting and reporting the system's status and degree of operability
- Confirmation that there are no hardware or software failures
- Identification of the software release
- Status of all data paths and memory locations to be used in vote recording to protect against contamination of voting data
- Other information needed to confirm the readiness of the equipment and to accommodate administrative reporting requirements
- Confirmation that the device is ready for the poll to be opened
- Upon conclusion of the tests, the software provides evidence in the audit record that the test data has been expunged.

The central scanning devices also perform a set of diagnostic tests after every power on/off cycle. Some of these tests require operator intervention and some are fully automated. At the end of the diagnostics process, the system generates a report with the system status information.

For network applications and user interfaces, Democracy Suite EMS Results Tally & Reporting has the ability to generate a zero-state report before the system is utilized. This report extracts all the relevant counters from the database which should be zero before the central scanning process is started. Electoral officers can use this report not only to check that all candidates have no votes, but also to check that the lists of elections and associated candidates are correct.

The EMS system also executes a security report which creates a list of all terminals, workstations, central scanning devices and all authenticated operators within the system.

“Election Run” Mode functionality

During scanning, all ballot batches are placed on the ballot entry tray. Upon initiating a scan, the tabulator pickup roller grabs one ballot at a time and moves the paper over both scanning read heads (thus acquiring a complete image of both sides of the ballot). The ballot is then analyzed and defined as one or more of the following:

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- Misread ballot or invalid ballot
- Blank ballot
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- Undervoted ballot
- Write-in ballot
- Ambiguous voting mark
- Ballot not linked to the current poll ID
- Ballot to which the write-in precedence rule was applied
- Overvoted party preference
- Unvoted party preference

- Cross-voted ballot
- Major overvote
- Major undervote
- Major overvoted rank
- Major inconsistent rank
- Major duplicate candidate rank
- Major skipped rank
- Major unvoted ranked contest
- Major unused rank
- Overvoted rank
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- Duplicate candidate rank
- Skipped rank
- Unvoted ranked contest
- Unused rank

Ballot Scanning Errors

The following will halt the scanning process.

- Misread or Invalid ballot: A ballot that cannot be processed by the tabulator for whatever reason. This includes legitimate ballots that have been mis-scanned, foreign pieces of paper, or blank pages.

- Multiple sheet warning: If more than one (overlapping) ballot is fed into the scanner at the same time.

When the offending ballot has been located in the ballot exit tray, it is removed for resolution. In addition, the scanners may be configured to halt on additional error conditions (i.e. overvotes, undervotes, blank ballots, etc.). The central scanning process is user definable and customizable to meet their exact needs.

Results from the ImageCast Central

The ImageCast Central stores ballot images by scanned batches. The scanned ballot images are migrated to the Election Management System through computer networking or removable media. As with results data from any precinct scanners in use for an election, Results Tally and Reporting is the portion of EMS that processes the images to provide tabulation and operational reports to the jurisdiction.

Batches can be appended, deleted, and processed in a number of ways to suit typical election workflows, intake of ballots before, during, and after Election Day, jurisdictional requirements surrounding absentee ballot tabulation, and canvassing needs. The ImageCast Central also features all of the technological advances present in the precinct-level tabulators – the AuditMark and the Dual Threshold technology.

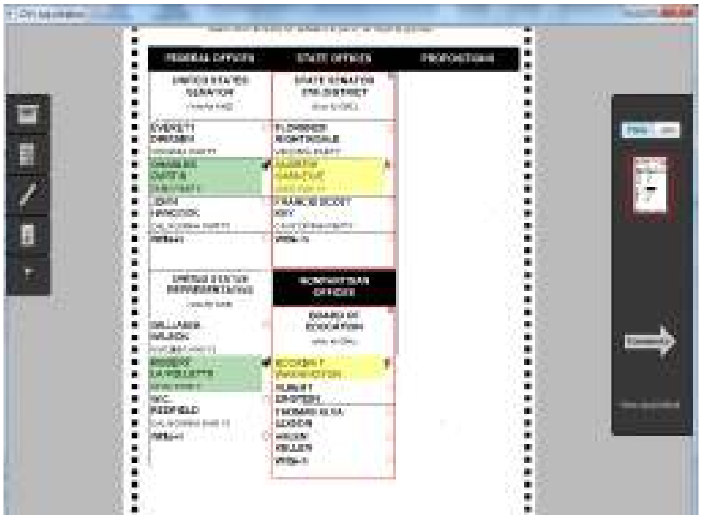
ImageCast Adjudication

The Adjudication Application is a stand-alone module that allows for the efficient processing of ballots that require resolution of voter intent on a ballot-by-ballot basis during the post-voting stage of an election. The Application has been developed to accept ballot files from ImageCast Central. After analysis and correction, the ballot files are sent to the EMS Results Tally & Reporting application for tally and reporting. The primary function of the Adjudication Application is to create an automated process that allows ballots with exceptions or "out-stack" conditions – such as overvotes, undervotes, blank ballots, marginal marks, major contests and certified write-ins – to be resolved on-screen and sent to tally. This eliminates the need for additional costs, time and resources spent on duplicating and re-scanning ballots.

Each County will be supplied with an Adjudication workstation to permit Adjudication of ballots with some anomalies to be performed simultaneously while the ballot scanning process is being conducted. This is an all new central scanning process that today's Dominion technology offers.

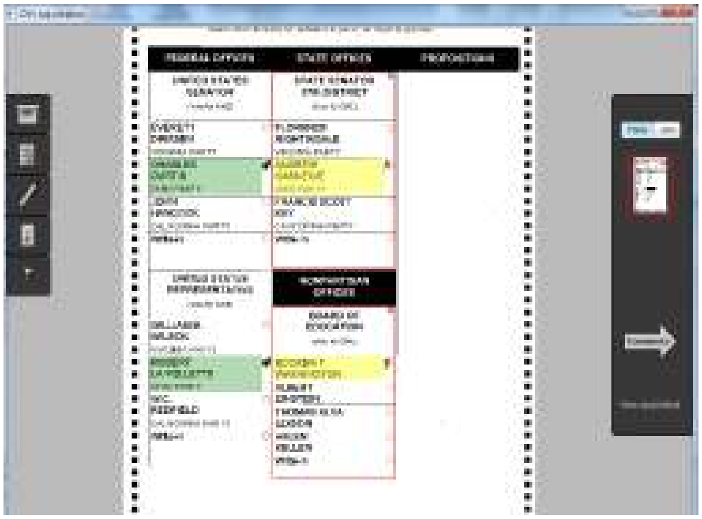
Streamlining Processing of Ballots with Conditions

The primary function of the Adjudication module is to create an automated process that allows ballots with exceptions or "out- stack" conditions to be resolved on-screen in real-time and sent to the results tally module. The customer defines which out-stack conditions should be reviewed in Adjudication, including blank ballots, overvotes, undervotes, marginal marks, and write-ins. Dominion's digital adjudication tool allows for easy and efficient write- in resolution.



The Adjudication Application adds to the efficiency of Dominion's ImageCast Central County system by making it scalable to as many reviewing teams as needed for the jurisdiction. The outstacked ballots will appear on the screen for the team to review as they come available. This created efficiencies that have never been seen in elections before.

In the examples shown to the right, the top picture shows the first adjudication screen with the contests that need review highlighted with a red box, and candidates with marginal marks highlighted in yellow. The second screen shows a vote being adjudicated for Andrew Carnegie.

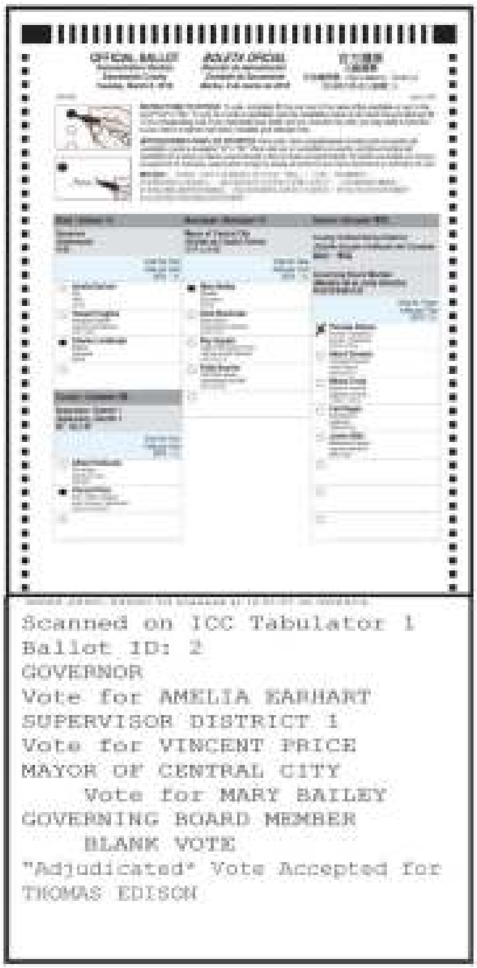


Adjudication also offers a robust, ballot-level audit trail. Each ballot scanned by the system is appended with an AuditMark. When a ballot is reviewed in the Adjudication module, and a user makes an adjudication decision, the ballot image is appended with a record of that decision: which user took what action at what time. This allows election officials to ensure that adjudication decisions made by authorized users can be further scrutinized and reviewed, and reversed if necessary, with a clear audit trail of which decisions were made concerning a particular ballot. When scanned centrally, the ballots are timestamped to further enhance the auditing capability of the system.

AuditMark

Enhancing Audit Capabilities and Transparency

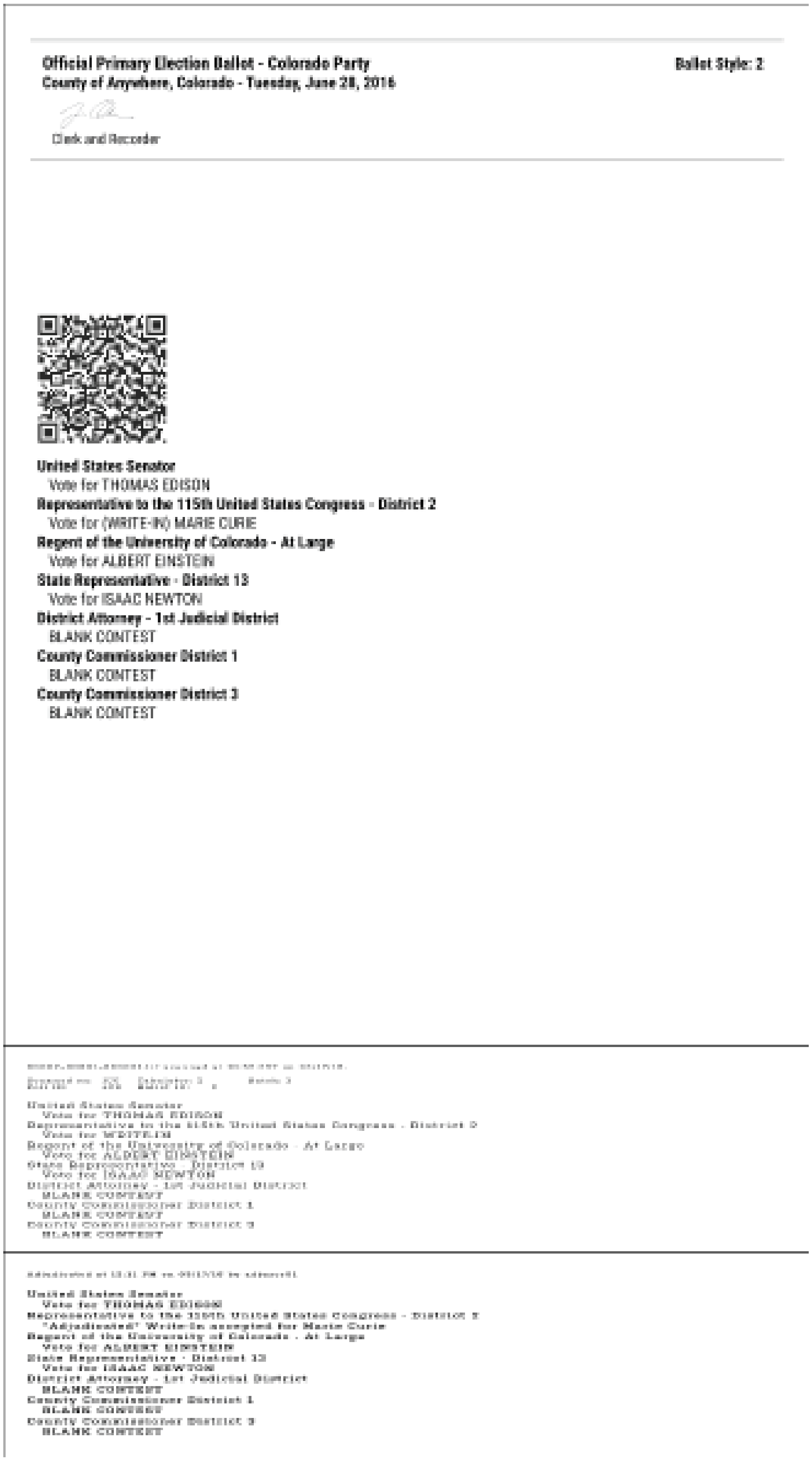
Dominion's AuditMark technology will allow the County to provide greater transparency in the electoral process. Every single ballot in the election is imaged and appended with Dominion's patented AuditMark, a record of how the system interpreted the voter's intent. The AuditMark is the only technology that provides a clear and fully auditable single vote cast record for every ballot cast. This ballot-level audit trail allows election officials and other stakeholders to review not only the ballot images, but also the tabulator's interpretation of each ballot.



```
Scanned on ICC Tabulator 1
Ballot ID: 2
GOVERNOR
Vote for AMELIA EARHART
SUPERVISOR DISTRICT 1
Vote for VINCENT PRICE
MAYOR OF CENTRAL CITY
    Vote for MARY BAILEY
GOVERNING BOARD MEMBER
    BLANK VOTE
"Adjudicated" Vote Accepted for
THOMAS EDISON
```

Each image is labeled with the tabulator, batch, and sequence number within the batch, which corresponds to the physical ballot in the stack. The AuditMark is appended directly to the image showing how the vote was interpreted at scan time. This AuditMark will also include any adjudications applied to the ballot for voter intent. Even if ballots for a given batch are mixed after scanning, these multiple records provide a way of correlating the digital Cast Vote Record data to the image scanned and finally to the physical paper ballot. While the AuditMark allows ballot-level auditing, it is never tied to the voter.

ImageCast X ballot appended with Audit Mark and Adjudication



Official Primary Election Ballot - Colorado Party
County of Anywhere, Colorado - Tuesday, June 28, 2016

Ballot Style: 2

Clerk and Recorder

United States Senator
Vote for THOMAS EDISON
Representative to the 115th United States Congress - District 2
Vote for (WRITE-IN) MARIE CURIE
Regent of the University of Colorado - At Large
Vote for ALBERT EINSTEIN
State Representative - District 13
Vote for ISAAC NEWTON
District Attorney - 1st Judicial District
BLANK CONTEST
County Commissioner District 1
BLANK CONTEST
County Commissioner District 3
BLANK CONTEST

```
[illegible]
[illegible]

United States Senator
   Vote for THOMAS EDISON
Representative to the 115th United States Congress - District 2
   Vote for WRITE-IN
Regent of the University of Colorado - At Large
   Vote for ALBERT EINSTEIN
State Representative - District 13
   Vote for ISAAC NEWTON
District Attorney - 1st Judicial District
   BLANK CONTEST
County Commissioner District 1
   BLANK CONTEST
County Commissioner District 3
   BLANK CONTEST
```

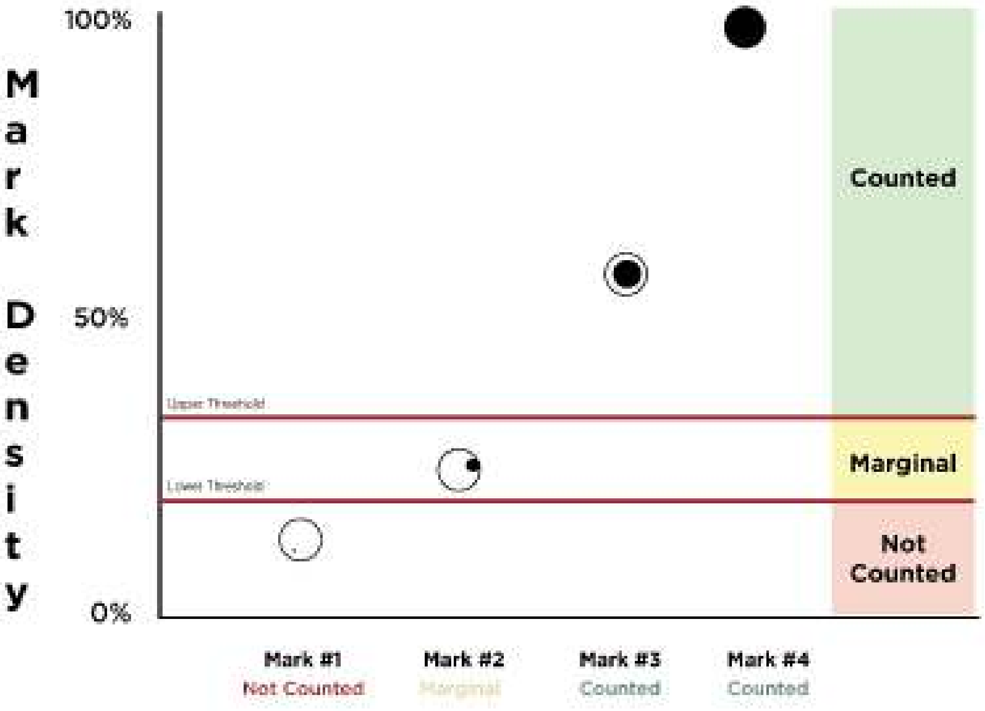
```
Adjudicated at [illegible]

United States Senator
   Vote for THOMAS EDISON
Representative to the 115th United States Congress - District 2
   "Adjudicated" Write-In accepted for Marie Curie
Regent of the University of Colorado - At Large
   Vote for ALBERT EINSTEIN
State Representative - District 13
   Vote for ISAAC NEWTON
District Attorney - 1st Judicial District
   BLANK CONTEST
County Commissioner District 1
   BLANK CONTEST
County Commissioner District 3
   BLANK CONTEST
```

Dual Threshold

When a hand-marked ballot is scanned by an ImageCast tabulator – at the precinct level or centrally – a complete duplex image is created and then analyzed for tabulation by evaluating the pixel count of a voter mark. The pixel count of each mark is compared with two thresholds (which are customer configurable, to determine what constitutes a vote).

If a mark falls above the upper threshold, it is determined to be a valid vote. If a mark falls below the lower threshold, it will not be counted as a vote. However, if a mark falls between the two thresholds (known as the “ambiguous zone”), it will be deemed as a marginal mark and the ballot will be flagged for adjudication where a team will review a voter’s intent and the outcome noted in the system.



Dual Threshold Mark Detection - Marginal Marks

This is another advanced Dominion feature to aid the counties in increasing the accuracy of mark detection and auditability.

Section 4 – Central Scanning Device

File 4-4 CSD Audit

4.4 Describe how the CSD assists with post-election audits.

Post-election audits can be done across 100% of the ballots cast in a given election because all ballots – hand marked Absentee ballots, provisional ballots, and BMD ballots will have been scanned and the total images stored. Each ballot scanned will include the AuditMark feature appended to each ballot image listing how each mark was interpreted by the scanning and tabulation process.

Further Dominion offers Risk Limiting Audit (RLA) functionality which is completely controlled and managed by the user. The parameters for selection of ballot populations to be audited range from a sampling of the precincts to 100% of the ballots cast is at your fingertips to validate the accuracy of the ballot casting processes.

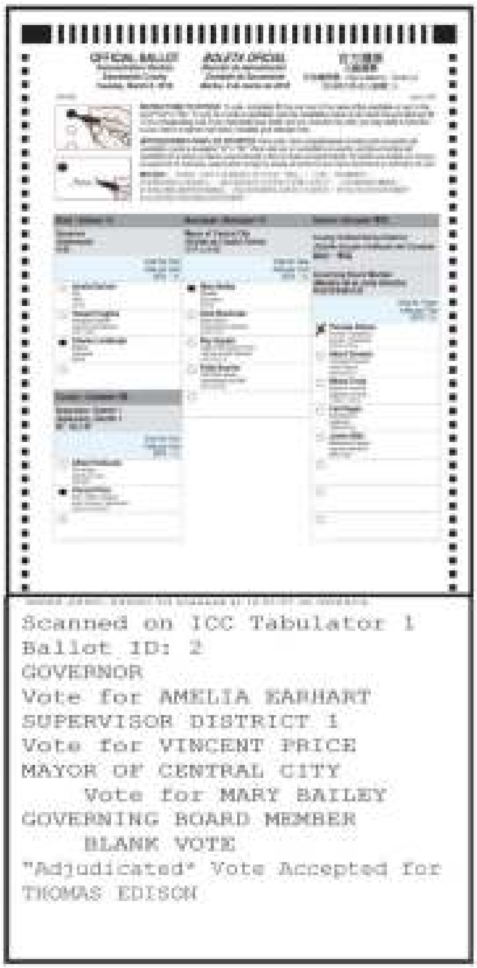
Post election audits are performed in the Results Tally and Reporting module of Democracy Suite. The ImageCast Central assists with the overall function of a post-election audit by accurately scanning, imaging both sides of the ballot scanned and tallying all ballots fed through the unit during an election. Below we describe the major functionalities that assist the overall accuracy for thescanning and tabulation process including the AuditMark and Dual Threshold technologies and the adjudication process:

AuditMark

Enhancing Audit Capabilities and Transparency

Dominion's AuditMark technology will allow the County to provide greater transparency in the electoral process. Every single ballot in the election is imaged and appended with Dominion's patented AuditMark, a record of how the system interpreted the voter's intent. The AuditMark is the only technology that provides a clear and fully auditable single vote cast record for every ballot cast. This ballot-level audit trail allows election officials and other stakeholders to review not only the ballot images, but also the tabulator's interpretation of each ballot.

Each image is labeled with the tabulator, batch, and sequence number within the batch, which corresponds to the physical ballot in the stack. The AuditMark is appended directly to the image showing how the vote was interpreted at scan time. This AuditMark will also include any adjudications applied to the ballot for voter intent. Even if ballots for a given batch are mixed after scanning, these multiple records provide a way of correlating the digital Cast Vote Record data to the image scanned and finally to the physical paper ballot. While the AuditMark allows ballot-level auditing, it is never tied to the voter.



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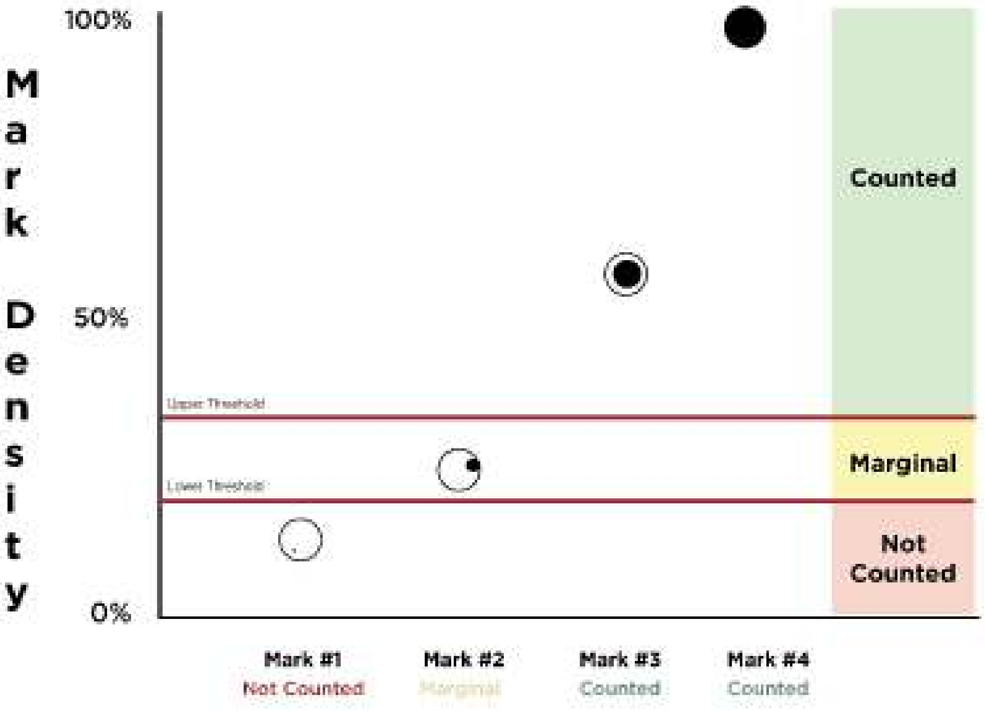

Dual Threshold Mark Detection - Marginal Marks

ImageCast Adjudication

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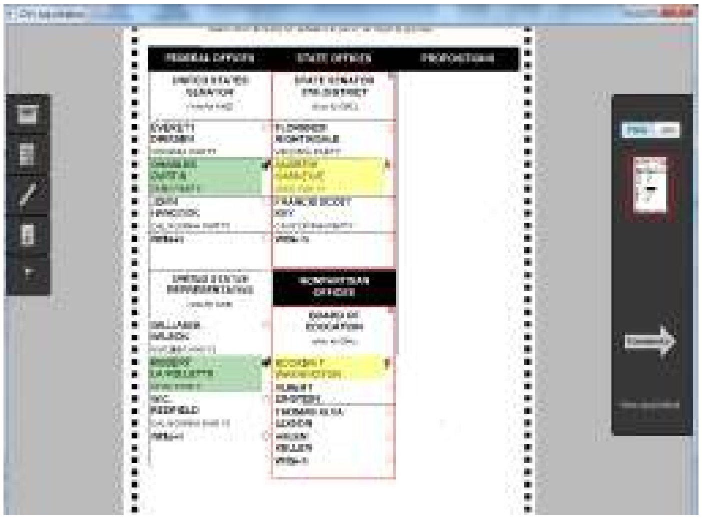
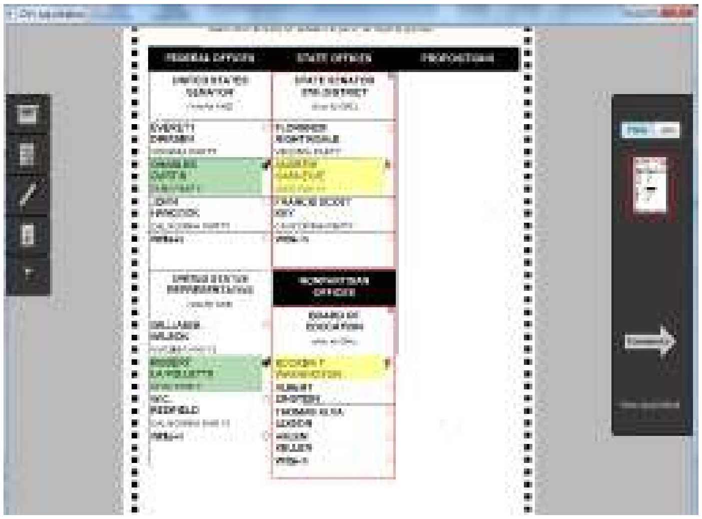
Streamlining Processing of Ballots with Conditions

The primary function of the Adjudication module is to create an automated process that allows ballots with exceptions or "out- stack" conditions to be resolved on-screen in real-time and sent to the results tally module. The customer defines which out-stack conditions should be reviewed in Adjudication, including blank ballots, overvotes, undervotes, marginal marks, and write-ins. Dominion's digital adjudication tool allows for easy and efficient write- in resolution.



The Adjudication Application adds to the efficiency of Dominion's ImageCast Central County system by making it scalable to as many reviewing teams as needed for the jurisdiction. The outstacked ballots will appear on the screen for the team to review as they come available. This created efficiencies that have never been seen in elections before.

In the examples shown to the right, the top picture shows the first adjudication screen with the contests that need review highlighted with a red box, and candidates with marginal marks highlighted in yellow. The second screen shows a vote being adjudicated for Andrew Carnegie.



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Reporting

As ballots are scanned, batches are directed to the Adjudication module if outstack conditions are detected, or sent to the Results Tally and Reporting module for tabulation.

Once batches are sent into the Results Tally and Reporting module, extensive reporting capabilities are available that will assist in reporting and auditing functions. The Results Tally and Reporting module of the Democracy Suite EMS produces fast, versatile and easy customizable reports from data available in the election project. The Results Tally and Reporting module of the Democracy Suite EMS uses SQL Server Reporting Services to produce the following standard reports:

- Election Summary Report
- Statement of Votes Cast (precinct-level results)
- Cards Cast Report

All these reports can be exported to PDF, Microsoft Word, Microsoft Excel, and Microsoft PowerPoint.

These three reports allow filtering by Polling Location, Tabulator and Counting Group. Election Summary and SOVC reports can be customized to include a number of statistics including: Times Cast, Undervotes, Overvotes, Total Votes, Counting Group breakdown, Write-Ins, Percentage by ballots cast or by votes cast, sorting of candidates by global order or by votes received. Filters by contest, precincts, or districts can be applied. Report titles can be modified to indicate unofficial or canvass results. Report profiles can be saved, loaded and exported between election projects.

Additional reports include:

- Results per precinct (simplified precinct-level report)
- Contest overview data (simplified summary report)
- Located Scanned Ballots
- Results per Tabulator
- Canvass
- Write-Ins per Tabulator
- Registration and Turnout
- Contests on Margin
- Tabulator Status
- Ballots Cast per Ballot Style
- Ballots Cast per Tabulator

All these reports can be generated at the same time that scanning and adjudication is happening, without affecting performance or accuracy.

All reports can be customized. Headers can be customized to include “official” or “non-official” wording, or other desired wording.

Extensive filtering and sorting capabilities allow for detailed breakdowns to provide information for any level of any contest as detailed below in the Election Summary Report and the Statement of Votes Cast (SoVC) Report explanations below:

Election Summary Report

The Election Summary Report displays election results by race, and is summarized across the jurisdiction. The information on these reports include the number of ballots cast, and the number of undervotes, overvotes, blank votes, and double votes.

The user is able to select one or more of the following Contest Statistics for inclusion in the report:

- Times Cast
- Undervotes
- Overvotes
- Combine Overvotes and Undervotes as ”Blanks”
- Double votes
- Total votes
- Counting Group Totals Only
- Writein Overrides
- Vote For
- X of Y

Candidate Statistics can include:

- Party affiliation
- If candidates are cross-endorsed, the user can break down results per party affiliation by leaving the item unchecked.
- Highlight Winners

- The user can show remaining Unresolved Write-in row or to hide that row
- The user can choose to count unresolved write-ins as undervotes
- The user can choose how percentages are calculated:
    - No percentages
    - Divided by Votes Cast
    - Divided by Ballots Cast
- – The user can choose how Write-Ins are represented:
    - No Write-ins
    - Combine - show single Write-In
    - Split - show individual Write-In positions in the contest

Additional Sorting/Splits

- – The user can indicate if the results should be broken down or not. Results can be broken
- down by:
    - Tabulator - Results are grouped per tabulator
    - Batch - Results are grouped per batch
- The user can choose how to sort candidates by the following criteria:
    - Global Order
    - Number Votes in descending order

The Filters for Report

- Filter for Contests - The user can choose to display all contests, or, by clicking the filter radio

  button, the user can select one or more contests to be displayed in the report, from the list provided on the form.
- Filter for Districts or Precincts - The user can select to display the results by districts or by precincts. For either selection, the user can display all districts/precincts, or, by

clicking the filter radio button, the user can display one or more districts/precincts in the report, from the list provided on the form.

- Filter for Polling Location - From the combo box on the form, the user can filter the report results by polling location.
- Filter for Tabulator - The user can choose to include results for all tabulators, or, by clicking the" filter" radio button, the user can select one or more tabulators to be included in the report, from the list provided on the form.
- Filter for Counting Group - From the combo box on the form, the user can filter report results by counting groups.

Statement of Votes Cast

The Statement of Votes Cast report provides election officials with the detailed results of an election. The report is divided into two sections: the first section is an overview of the cards cast and eligible voters broken down per precinct, district, and district type. The second section shows the election results on a contest-by-contest basis and includes the number of ballots cast, the vote totals for each candidate, and the number of write-ins, undervotes, and overvotes.

The user can customize the report title and allows for extensive filtering and customizations including:

Contest Statistics:

- Times Cast
- Undervotes
- Overvotes
- Double votes
- Total votes
- Counting Group Totals Only
- Write-in Overrides
- Vote For

Candidate Statistics:

- The user can break down results per party affiliation in the case that candidates are cross-endorsed by leaving the item unchecked
- The user can display remaining Unresolved Write-in column or to hide that column
- The user can choose to count unresolved write-ins as undervotes.
- The user can select how percentages are calculated:
    - No percentages
    - Divided by Votes Cast
    - Divided by Ballots Cast

- The user can select how Write-Ins are represented:
    - No Write-ins
    - Combine - show single Write-In
    - Split - show individual Write-In positions in the contest

- The user can choose how to split the data:
    - By Precinct
    - By District Detailed information
    - Precinct Portion
    - By Ballot Type

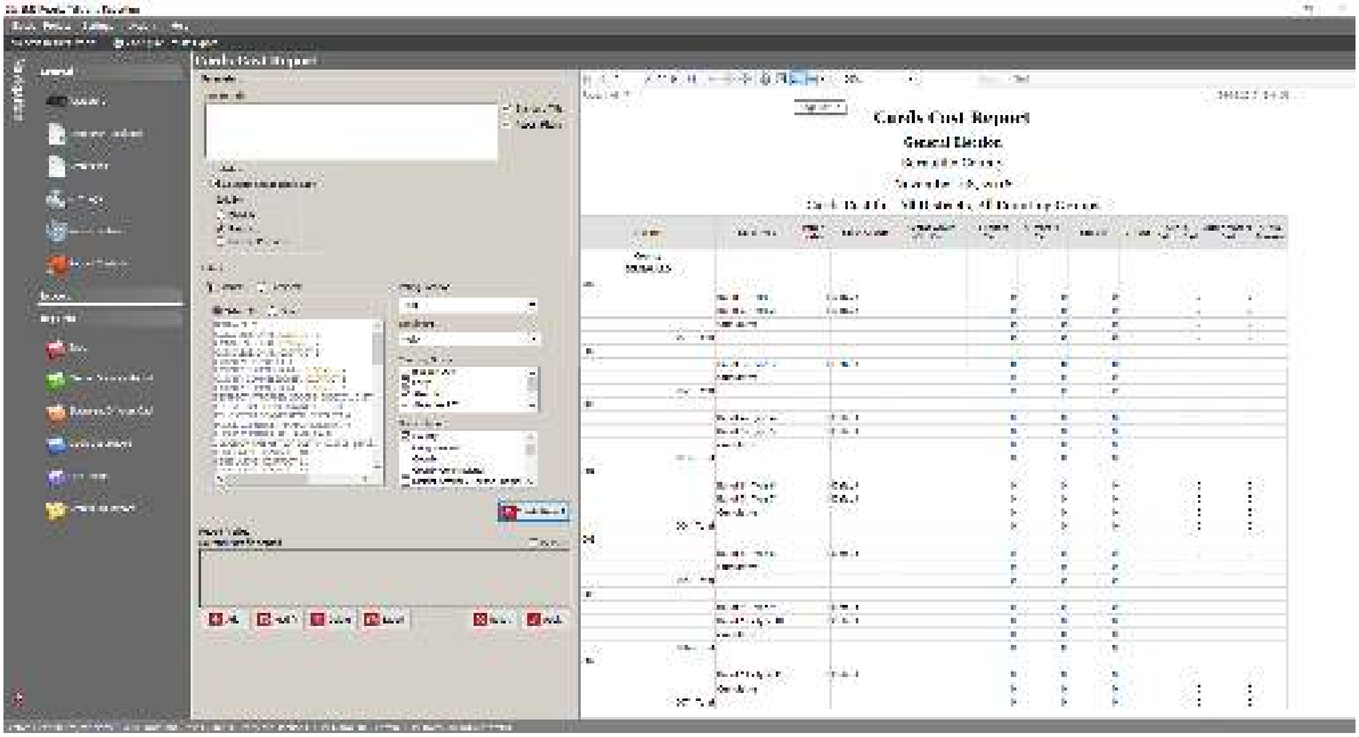
- **The Filters for Report**
    - Filter for Contests - The user can choose to display all contests, or, by clicking the filter radio button, the user can select one or more contests to be displayed in the report from the list provided on the form. Note: This filter does not affect the first report section, if the user wishes to narrow the first section of the report the Filter for Districts or Precincts must be used.
    - Filter for Districts or Precincts - The user can select if they wish to display the results by districts or by precincts. For either selection, the user can display all

districts/precincts, or, by clicking the Filter radio button, the user can display one or more districts/precincts in the report from the list provided on the form.

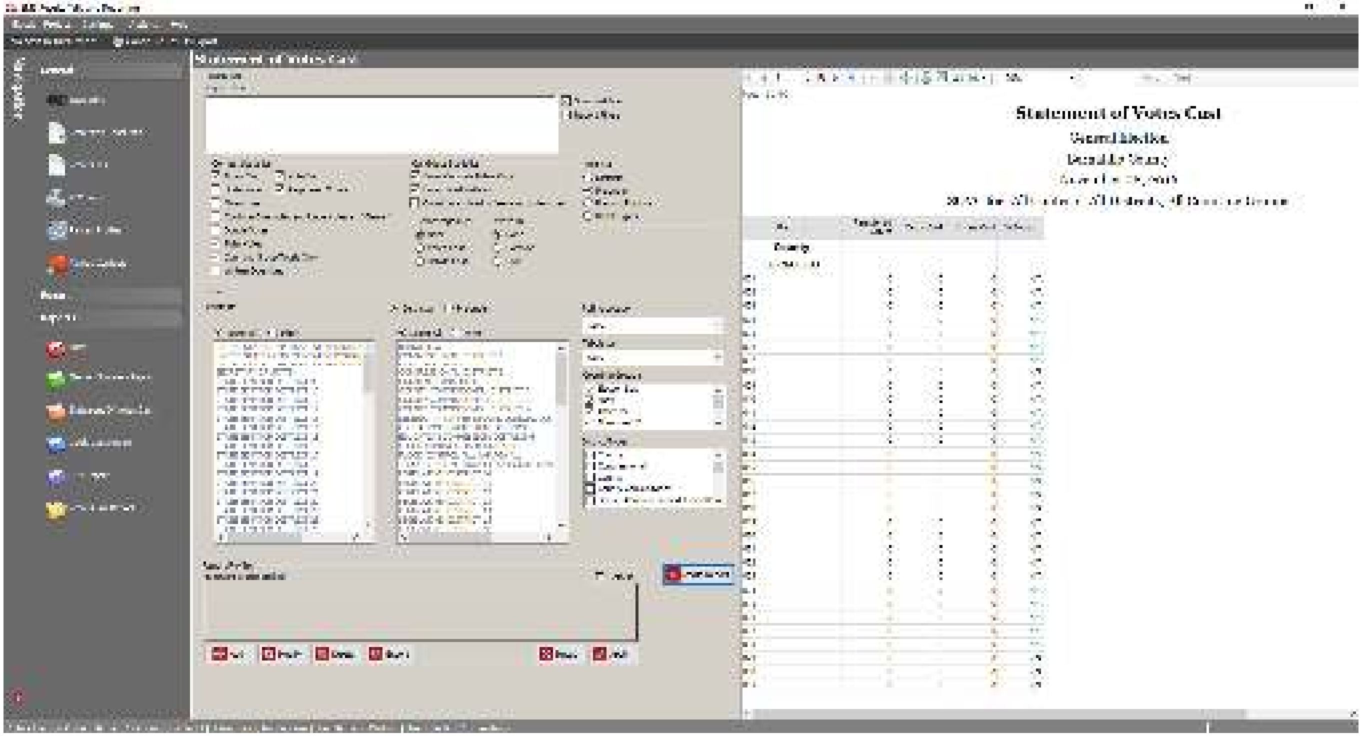
- Filter for Polling Location - From the combo box on the form, the user can filter the report results by polling location.
- Filter for Tabulator - In the combo box on the form, the user can filter the report results by tabulator. the form by which to filter results in the report.
- Filter for Counting Group - From the combo box on the form, the user can filter report results by counting groups.
- Filter for District Type - In the combo box on the form, the user can filter the report results by district.

Sample report screenshots are provided on the following pages.

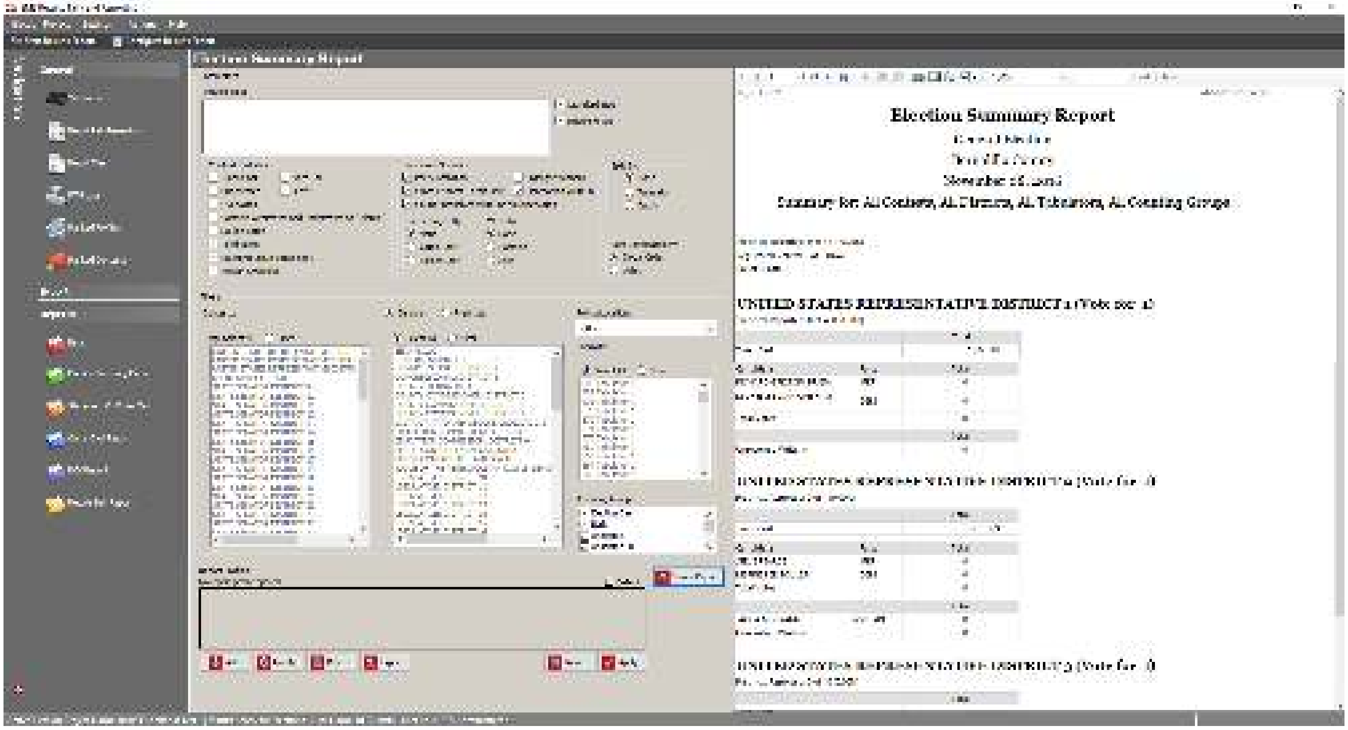
Cards Cast Report



Statement of Votes Cast Report



Election Summary Report



Election Summary Report

Summary for: All Contests, All Districts, All Tabulators, All Counting Groups

UNITED STATES REPRESENTATIVE DISTRICT 1 (Vote for 1)

Section 4 – Central Scanning Device

File 4-5 CSD Ease of Use

4.5 Ease of Use for Local Election Officials: Provide and demonstrate customer experiences via referrals and specific case studies or white papers including access, special features, and any other customer feedback.

Dominion works with more than 3,000 entities across North America to provide elections services, software and hardware. We pride ourselves on the partnership that we strive to build with each customer.

In addition to the references we provide in response to 0-7 References, we would like to offer several letters of reference from larger entities that are currently utilizing Democracy Suite and a similar product array as we are proposing in Georgia. Letters from Sacramento County and Contra Costa County, California will provide a high-level overview of the success we have experienced through the implementation and use of our system.

As letters can only provide a snapshot of the user experience, we would also like to provide several links to several testimonial videos produced in conjunction with our customers in the City and County of Denver, and Clark County, Nevada. We feel these video testimonials provide a picture of the type of partnership we commit to developing.

City and County of Denver:

https://www.youtube.com/watch?v=Zyqg-LcAkC0

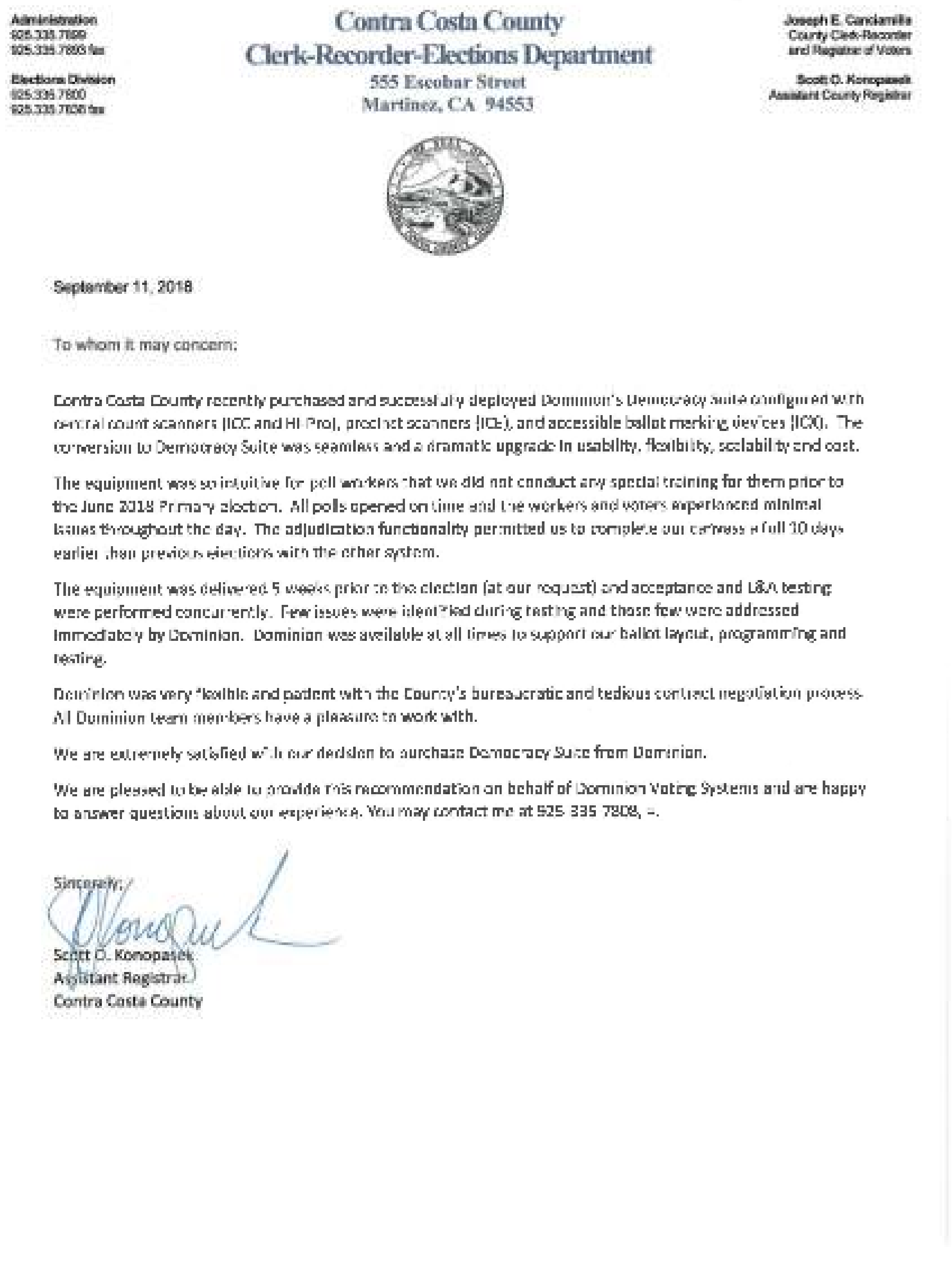
Clark County Video #1 -2018

https://www.youtube.com/watch?v=WejC40bgvic

Clark County Video #2 – 2017

https://youtu.be/j9TsDwsHVPA

Letters of reference provided on the following pages:



Administration
925.335.7899
925.335.7893 fax

Elections Division
925.335.7800
925.335.7836 fax

Contra Costa County
Clerk-Recorder-Elections Department
555 Escobar Street
Martinez, CA 94553

Joseph E. Canciamilla
County Clerk-Recorder
and Registrar of Voters

Scott O. Konopasek
Assistant County Registrar

September 11, 2018

To whom it may concern:

Contra Costa County recently purchased and successfully deployed Dominion's Democracy Suite configured with central count scanners (ICC and HI-Pro), precinct scanners (ICE), and accessible ballot marking devices (ICX). The conversion to Democracy Suite was seamless and a dramatic upgrade in usability, flexibility, scalability and cost.

The equipment was so intuitive for poll workers that we did not conduct any special training for them prior to the June 2018 Primary election. All polls opened on time and the workers and voters experienced minimal issues throughout the day. The adjudication functionality permitted us to complete our canvass a full 10 days earlier than previous elections with the other system.

The equipment was delivered 5 weeks prior to the election (at our request) and acceptance and L&A testing were performed concurrently. Few issues were identified during testing and those few were addressed immediately by Dominion. Dominion was available at all times to support our ballot layout, programming and testing.

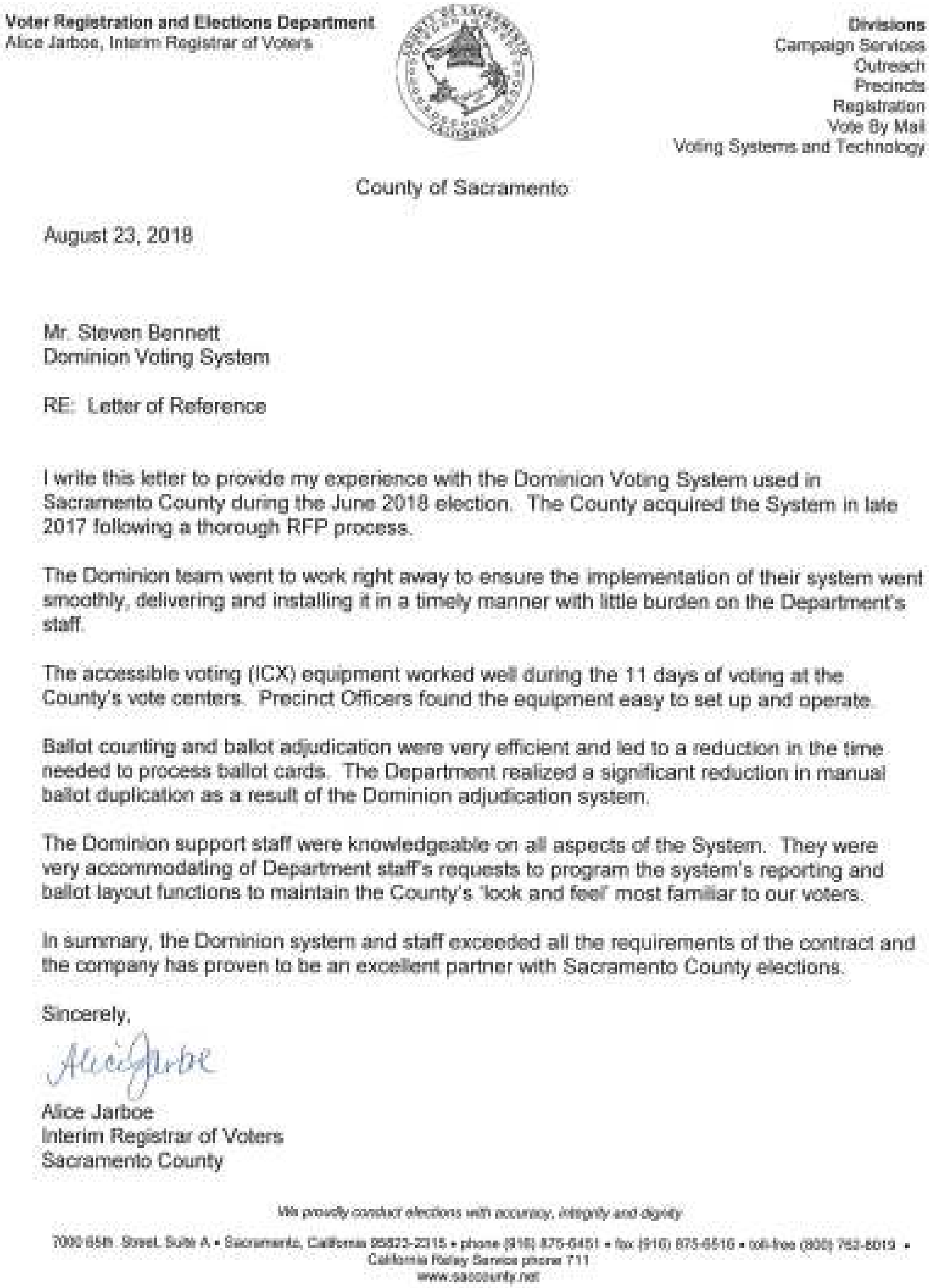
Dominion was very flexible and patient with the County's bureaucratic and tedious contract negotiation process. All Dominion team members have a pleasure to work with.

We are extremely satisfied with our decision to purchase Democracy Suite from Dominion.

We are pleased to be able to provide this recommendation on behalf of Dominion Voting Systems and are happy to answer questions about our experience. You may contact me at 925-335-7808, =.

Sincerely,

Scott O. Konopasek
Assistant Registrar
Contra Costa County



Voter Registration and Elections Department
Alice Jarboe, Interim Registrar of Voters

Divisions
Campaign Services
Outreach
Precincts
Registration
Vote By Mail
Voting Systems and Technology

County of Sacramento

August 23, 2018

Mr. Steven Bennett
Dominion Voting System

RE: Letter of Reference

I write this letter to provide my experience with the Dominion Voting System used in Sacramento County during the June 2018 election. The County acquired the System in late 2017 following a thorough RFP process.

The Dominion team went to work right away to ensure the implementation of their system went smoothly, delivering and installing it in a timely manner with little burden on the Department's staff.

The accessible voting (ICX) equipment worked well during the 11 days of voting at the County's vote centers. Precinct Officers found the equipment easy to set up and operate.

Ballot counting and ballot adjudication were very efficient and led to a reduction in the time needed to process ballot cards. The Department realized a significant reduction in manual ballot duplication as a result of the Dominion adjudication system.

The Dominion support staff were knowledgeable on all aspects of the System. They were very accommodating of Department staff's requests to program the system's reporting and ballot layout functions to maintain the County's 'look and feel' most familiar to our voters.

In summary, the Dominion system and staff exceeded all the requirements of the contract and the company has proven to be an excellent partner with Sacramento County elections.

Sincerely,

Alice Jarboe

Alice Jarboe
Interim Registrar of Voters
Sacramento County

We proudly conduct elections with accuracy, integrity and dignity

7000 65th Street, Suite A • Sacramento, California 95823-2315 • phone (916) 875-6451 • fax (916) 875-6516 • toll-free (800) 762-8019 •
California Relay Service phone 711
www.saccounty.net

Section 4 – Central Scanning Device

File 4-6 CSD Capacity

4.6 Ballot Scanning Capacity: Describe the number of ballots per minute that can be scanned, imaged, and tabulated by the proposed CSD. Specify by ballot type and size.

The Canon DR-G1130 is capable of scanning 8.5" x 11" ballots at a speed of approximately 100 ppm (pages per minute), as per Dominion Voting's Quality Assurance test results. Increasing the ballot length will slightly decrease the scan speed with 8.5” x 14” ballot scanning at a rate of approximately 80 ppm, and 8.5” x 17” ballots scan at a rate of approximately 50 ballots per minute.

The Canon DR-M160II is capable of scanning 8.5" x 11" ballots at a speed of approximately 60 ppm (pages per minute), as per Dominion Voting's Quality Assurance test results. Increasing the ballot length will slightly decrease the scan speed with 8.5” x 14” ballot scanning at a rate of approximately 25 ppm, and 8.5” x 17” ballots scan at a rate of approximately 15 ballots per minute.

The system is scalable, so decreasing or increasing any aspect is accomplished by adding or removing scanners. Larger precincts can opt to add ImageCast Central units to increase volume. Up to 50 ImageCast Central workstations and scanners can be linked to handle any volume required.

Section 4 – Central Scanning Device

File 4-7 CSD Environment

4.7 Describe how the proposed CSD handles adverse environmental and physical ballot conditions (i.e. water, humidity, bent or torn ballots, etc.).

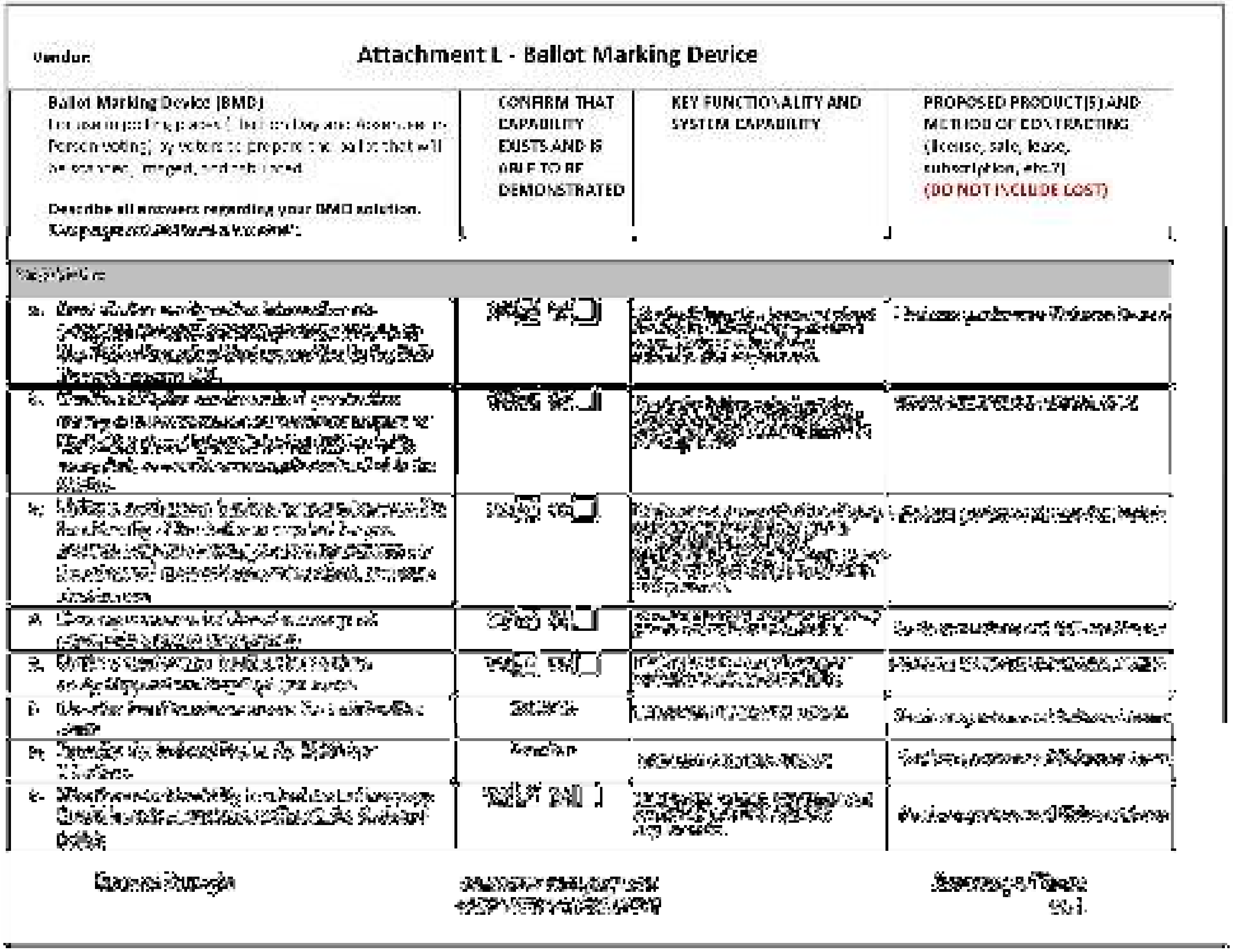
The ImageCast Central has a proven track record of being able to scan ballots in real-life ballot scenarios, such as folded ballots, and ballots that have been crushed, stained or are dirty. Customers have noted that this has significantly reduced the number of ballots that need to be manually duplicated before being processed through the system, and Dominion anticipates that this will also be the case for Georgia Counties. The Canon scanners feature a simple paper path, limiting the number of paper jams. There is no pre-sorting of ballots or re-orientation of ballots needed before scanning.

In cases where ballots are damaged beyond readability, dominion can offer several solutions including duplicating the ballot using a fresh printed ballot using the Mobile Ballot Printer module that includes the same contests and measures of the original ballot, or utilizing the ImageCast X to duplicate the ballot and voter selections using the touchscreen tablet and in-booth printer. Ultimately, ballot duplication will be handled based on state and jurisdictional rules and requirements.

Section 5 – Ballot Marking Device (BMD)

File 5-1 BMD

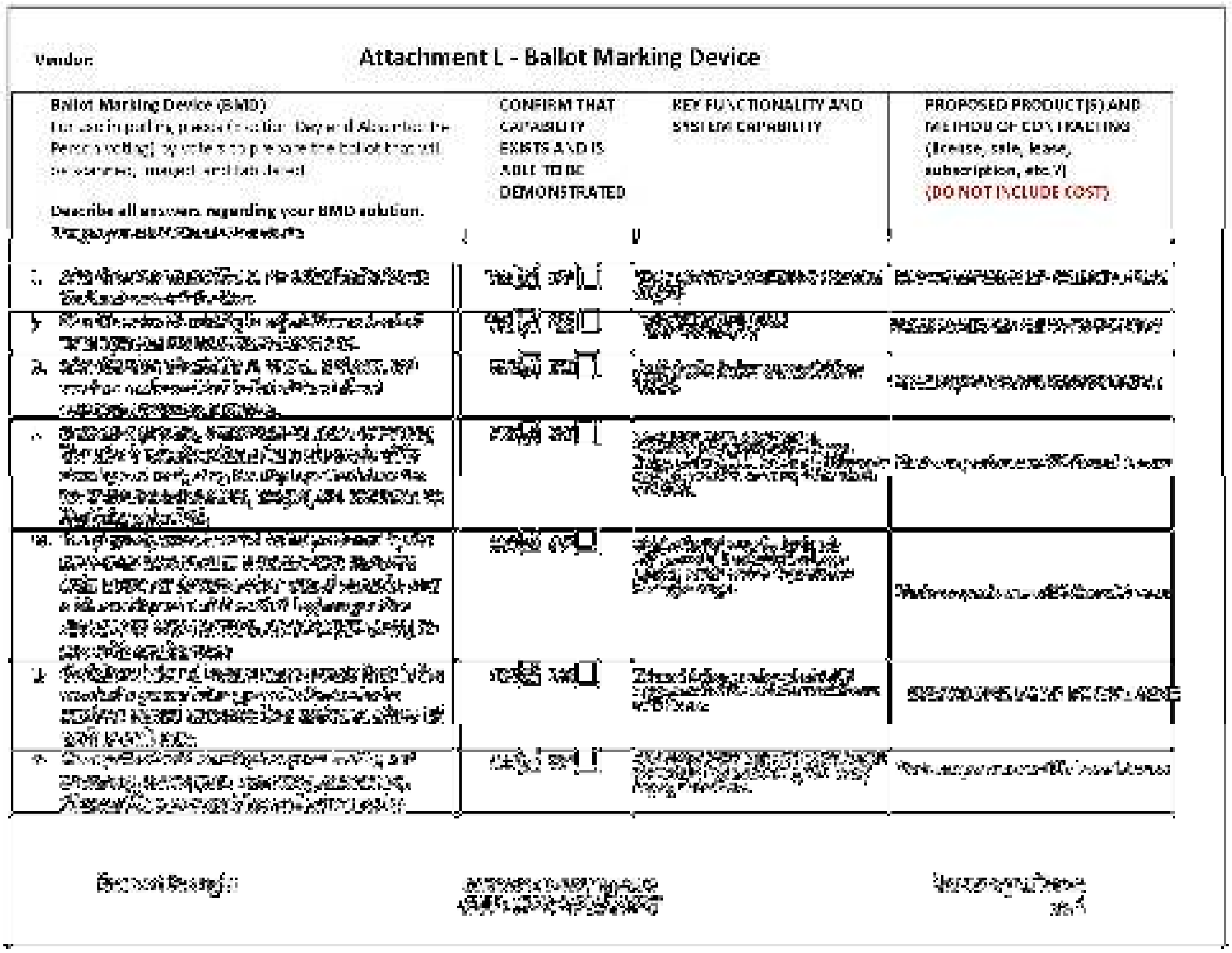
5.1 Complete the attached form titled "Ballot Marking Device" and include narrative.



Vendor:

Attachment L - Ballot Marking Device

Ballot Marking Device (BMD) For use in polling places (Election Day and Absentee In-Person voting) by voters to prepare the ballot that will be scanned, imaged, and tabulated. Describe all answers regarding your BMD solution. [illegible]	CONFIRM THAT CAPABILITY EXISTS AND IS ABLE TO BE DEMONSTRATED	KEY FUNCTIONALITY AND SYSTEM CAPABILITY	PROPOSED PRODUCT(S) AND METHOD OF CONTRACTING (license, sale, lease, subscription, etc.?) (DO NOT INCLUDE COST)
[illegible]			
a. [illegible]	[illegible]	[illegible]	[illegible]
b. [illegible]	[illegible]	[illegible]	[illegible]
c. [illegible]	[illegible]	[illegible]	[illegible]
d. [illegible]	[illegible]	[illegible]	[illegible]
e. [illegible]	[illegible]	[illegible]	[illegible]
f. [illegible]	[illegible]	[illegible]	[illegible]
g. [illegible]	[illegible]	[illegible]	[illegible]
h. [illegible]	[illegible]	[illegible]	[illegible]



Vendor:

Attachment L - Ballot Marking Device

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[illegible]	[illegible] ☐	[illegible]	[illegible]
[illegible]	[illegible] ☐	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
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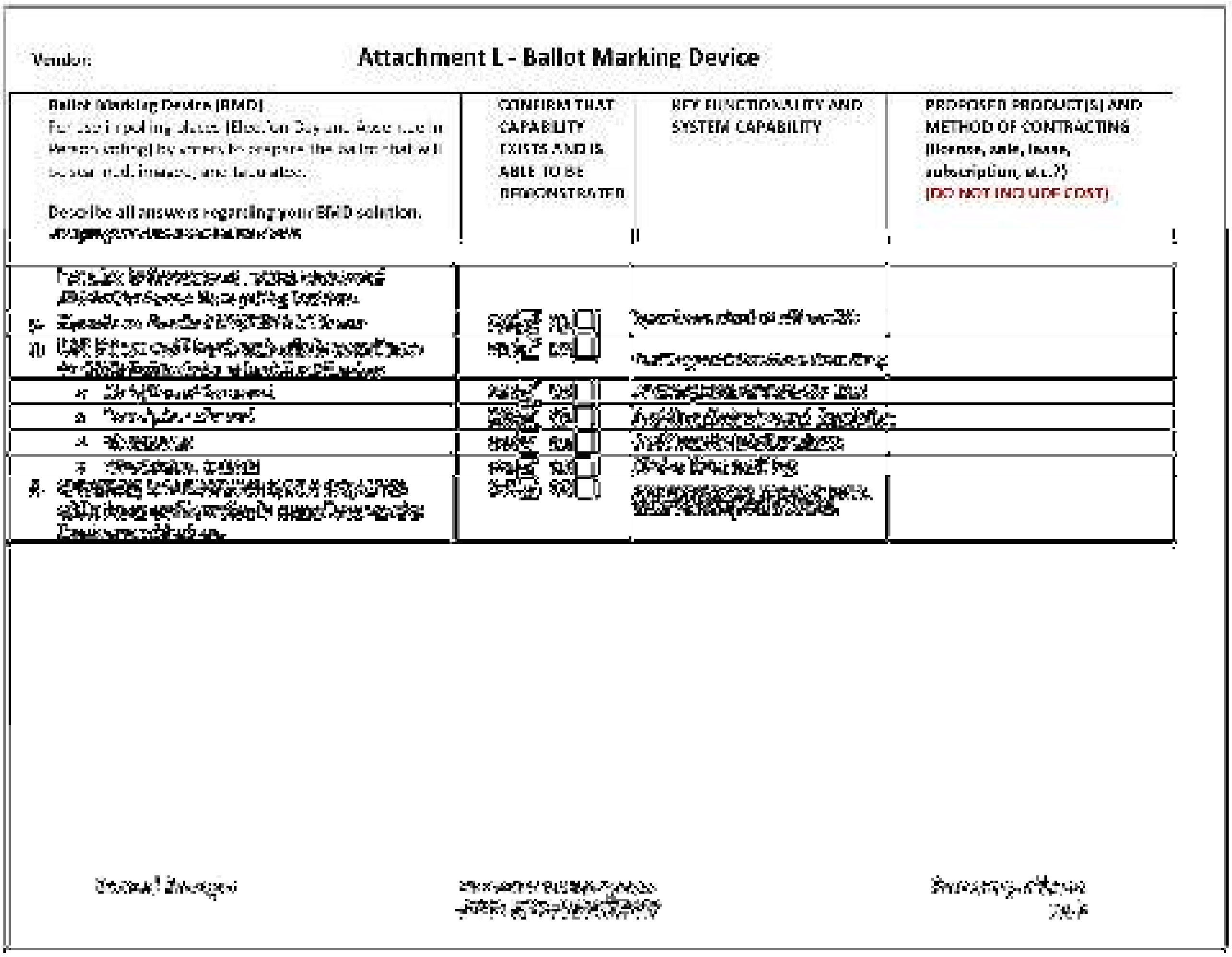
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

[illegible] [illegible] [illegible]



Vendor:

Attachment L - Ballot Marking Device

Ballot Marking Device (BMD) For use in polling places (Election Day and Advance in Person voting) by voters to prepare the ballot that will be scanned, imaged, and tabulated. Describe all answers regarding your BMD solution. [illegible]	CONFIRM THAT CAPABILITY EXISTS AND IS ABLE TO BE DEMONSTRATED	KEY FUNCTIONALITY AND SYSTEM CAPABILITY	PROPOSED PRODUCT(S) AND METHOD OF CONTRACTING (license, sale, lease, subscription, etc.?) (DO NOT INCLUDE COST)
[illegible]	[illegible] ☐	[illegible]	
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[illegible]	[illegible] ☐	[illegible]	
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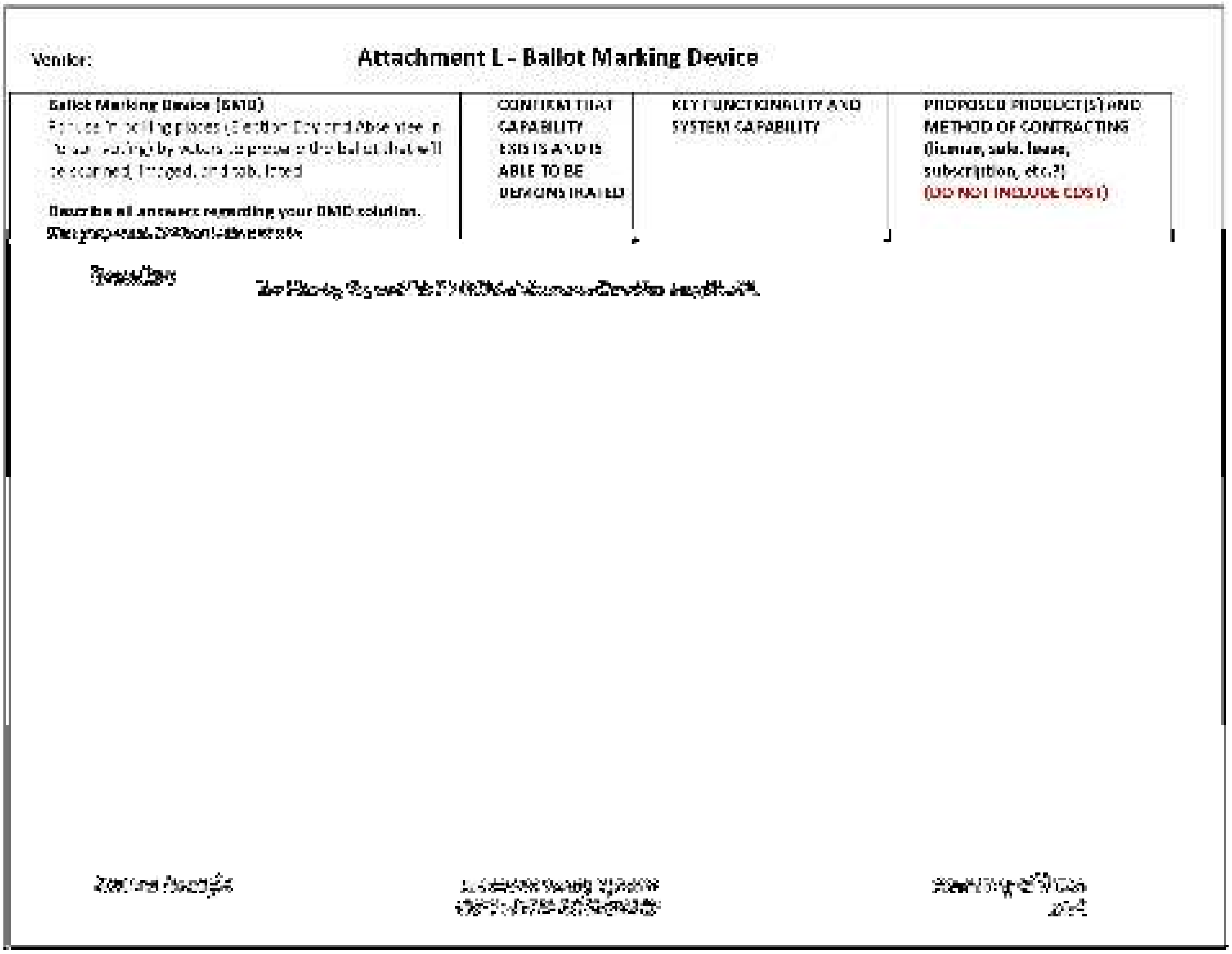


Vendor:

Attachment L - Ballot Marking Device

Ballot Marking Device (BMD) For use in polling places (Election Day and Absentee in-Person voting) by voters to prepare the ballot that will be scanned, imaged, and tabulated **Describe all answers regarding your BMD solution.** [illegible]	CONFIRM THAT CAPABILITY EXISTS AND IS ABLE TO BE DEMONSTRATED	KEY FUNCTIONALITY AND SYSTEM CAPABILITY	PROPOSED PRODUCT(S) AND METHOD OF CONTRACTING (license, sale, lease, subscription, etc?) (DO NOT INCLUDE COST)

[illegible] [illegible]

[illegible] [illegible] [illegible]

ImageCast X Ballot Marking Device

The ImageCast X BMD is a highly scalable unit that can meet the needs of large and small jurisdictions by simply assigning an appropriate number of units based on expected throughput. With the addition of a “plug and play” Audio Tactile Interface (ATI) the ImageCast X also serves as the HAVA compliant accessible unit. Ballots generated by the ImageCast BMD will be fed into the ImageCast Precinct for tabulation.

Fully integrated into the Democracy Suite platform, the ImageCast X takes advantage of commercially available technologies and is driven by a robust, secure and flexible application developed by Dominion. The use of compact, commercially available hardware makes the ImageCast X a cost-effective and versatile in-person voting solution. It requires less space to warehouse and is more affordable than larger proprietary solutions, while at the same time offering full ADA compliance.

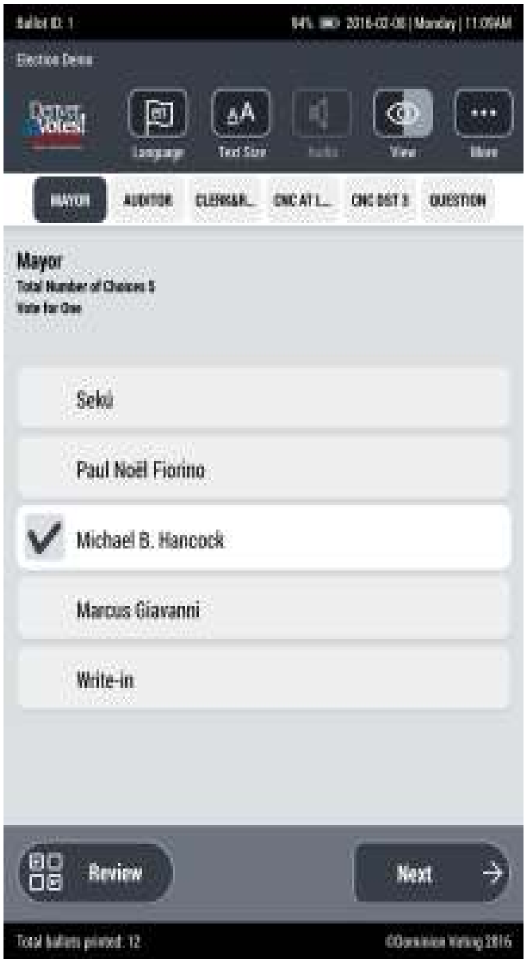
The ImageCast X is a universal voting device that is software driven and leverages the flexibility of COTs technology

The ImageCast X has an intuitive touchscreen interface with various features for accessibility and connects to a printer that prints the voter’s ballot immediately. Once the ballot is printed, the voter reviews the text summary of their selections and either scans their ballot on the ImageCast Precinct (ICP) or requests to spoil their ballot and is given another opportunity to mark another ballot.

Training for election poll workers is straightforward and quite easy to understand. With three simple steps, the ImageCast X is ready to be turned on. Simple on-screen instructions guide the poll worker when preparing the unit for voting.

When a voter checks in to vote, the poll worker will verify the voter's credentials and program a Smart Card using the Electronic Pollbook. A Smart Card is used to activate a voting session on the ImageCast X and to present the voter with their correct ballot style. No information that can identify the voter is programmed on the Smart Card, and once the voter has printed their ballot, the card is inactivated and can be returned to be re-programmed for the next voter.

After inserting the Smart Card, the voter will automatically be presented with the first contest on the ballot. The voter will navigate the ballot contest-by-contest by touching the screen to select options, candidates, and text for write-in candidates. The voter can change or cancel their selection by deselecting their previous choice. The voter can also change the text size or contrast of the display. The View button allows the voter to change the display to high contrast white on black, or black on white. The text size button allows the voter to change the text size.


Ballot ID: 1

Election Demo

Mayor
Total Number of Choices 5
Vote for One

☐ Seku
☐ Paul Noël Fiorino
☑ Michael B. Hancock
☐ Marcus Giavanni
☐ Write-in

Total ballots printed: 12

Voter navigation of the ballot will be very similar to what the Georgia voter has grown accustom to. In fact, they will enjoy the presentation of the ballot and the ease of moving from screen to screen and contest to contest.

At any time, the voter can select the Review button to view their selections on their ballot. The ballot review will show all of the contests on the ballot and give warning messages if there are any issues with the ballot, such as an undervote or blank contest. If the voter wishes to modify a contest, they simply touch that contest from the review screen and they will be taken directly to that contest page so that they can update their selection(s).

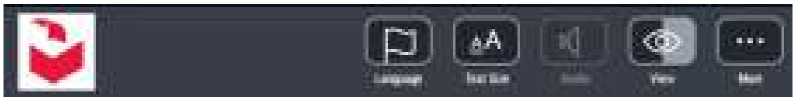
Once the voter has reviewed their ballot and has confirmed they are ready to print, the ImageCast X can print a verifiable choice summary ballot which contains a written summary of the voter's choices, as well as a 2D barcode which is read by the ImageCast Precinct. No voter selections are stored on the ImageCast X.

The length of time it takes to cast a ballot on the ICX is determined not by the technology but by how prepared the voter is. Since the ballot choices are summarized on the printed ballot generated on the BMD, all ballots are 8.5" x 11" and take only seconds to print.

User Customizations and Intuitive Interface

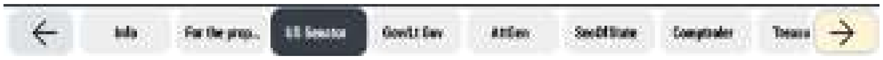
During the active voting session, there are several menus and bars intended for adjusting the voting interface as desired and navigating through the ballot.

At the top of the screen, an *Action* bar is placed containing buttons for changing various graphic and audio settings. These settings can be changed at any point in the voting session and are consistent throughout the whole session.



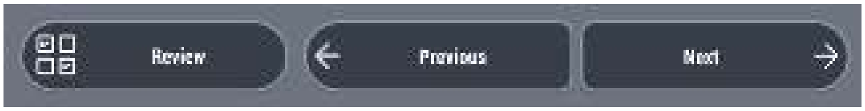
Action Bar

- The "*Language*" button opens a pop-up menu with all the languages defined for current elections. The voter can change the language be pressing a checkbox with the desired language.
- Text size can be changed by choosing one of the options displayed by pressing a "*Text Size*" button.
- The "*Audio*" button is active only in an AVS session.
- The "*View*" button allows changing the visual theme of the voting interface.
- Pressing the "*More*" button allows the voter to cancel the current voting session by tapping the *"Cancel Activation"* in the pop-up menu or display the information about the ICX device and software by pressing the *"about"* button.



Contest Bar

- The *Contest Bar* is located right under the Action bar and is used for navigation between the contest on the ballot. By tapping on the desire button, the corresponding contest will be displayed on the screen.
-



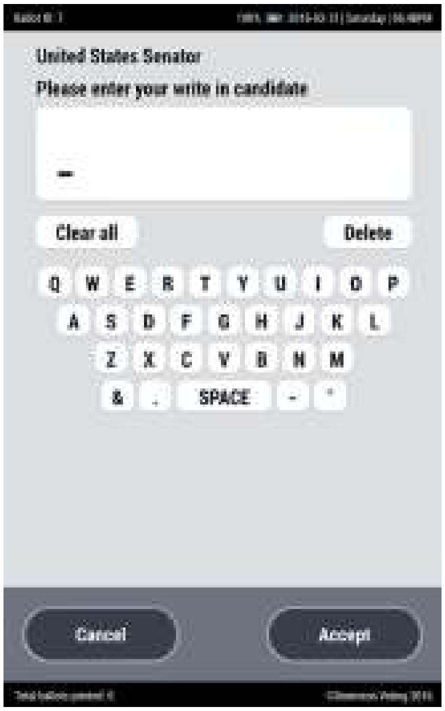
Navigation Bar

- Beside the Contest Bar, the voter can navigate between the contests by using the *Navigation Bar* at the bottom of the screen. Pressing the *"Previous"* and *"Next"* buttons will display the previous/next Contest bar.
- Selecting the *"Review"* button will display the Review screen that contains all contests and choices marked by the voter.
- The Review screen will also display notifications about any errors or warnings if the ballot is not valid or incomplete.
- The voter can navigate through all of their choices by pressing *"Scroll Down/Scroll Up"* buttons at the bottom/top of the contest list.
- In case the voter wants to change the choices for a specific contest, selecting (tapping) that contest in the review list will return the voter to that specific contest screen.
- The same functionality is provided by pressing the *"Back to Ballot"* button in the bottom left corner of the review screen.
- The ballot is printed by selecting the *"Print Ballot"* button in the right bottom corner. Pressing this button prompts a final dialog that, again, displays any warnings for the ballot and provides the options to confirm the ballot printing or to return to the Review screen. After the voting session is complete, a screen is presented informing the voter of the result of the action. At this point, the voter can safely remove the smart card.

Write-ins

If the voter would like to vote for a write-in candidate, they tap the write-in option from the list of candidates. The voter will be presented with a QWERTY keyboard, where they can type in the name of their write-in.

Touching the “Accept” button will designate that vote as a write-in and include the name of the write- in on the screen.


United States Senator

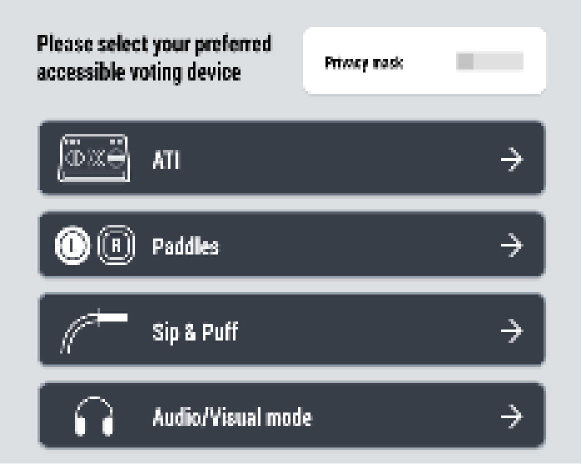
Please enter your write in candidate

Accessibility

Designed as a voting solution for all, the ImageCast X also offers several options for voters with accessibility needs to vote in a private and independent manner. The ImageCast X offers the following user interfaces:

- Visual mode: Voter navigates their ballot using one of the available accessibility tools and the visual display
- Audio mode: Visual display can be disabled, and the voter uses headphones to navigate an audio ballot using one of the available accessibility tools
- Visual & audio mode: Voter navigates their ballot using one of the available accessibility tools, the visual display, and the audio ballot

In addition to the touchscreen functionality, the ImageCast X is compatible with a range of accessibility tools that voters can use to navigate through the ballot and make their selections. The system is compatible with commercially available accessibility devices, such as a four-way joystick, as well as a hand-held controller called the Audio Tactile Interface (ATI), sip and puff device, or paddle device.

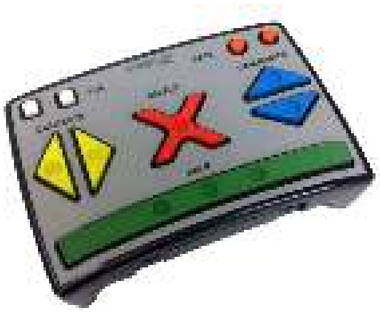


Please select your preferred accessible voting device

The ImageCast X is compatible with a range of accessibility tools and can present the ballot in audio only, visual only or both audio/visual mode.

The Audio Tactile Interface (ATI) is the handheld device that is used by a voter during an Accessible Voting Session to navigate through and make selections to their ballot. The ATI:

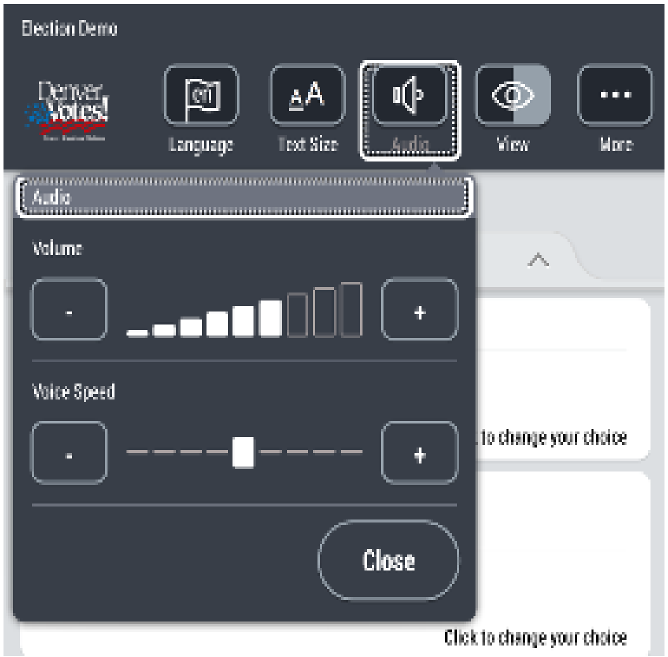
- Has raised keys that are identifiable tactilely without activation (i.e. raised buttons of different shapes and colors, large or Braille numbers and letters)
- Can be operated with one hand
- Includes a 3.5 mm headphone jack
- Includes a T-Coil coupling
- Has a T4 rating for interference
- Uses light pressure switches
- Can be equipped with a pneumatic switch, also known as a sip and puff device, or a set of paddles.



The ImageCast X can present the ballot in audio only, visual only, or both audio and visual modes, depending on personal preference. Voters can adjust the rate and volume of their audio ballot, as well as the text size and contrast of the display, or disable the display entirely for added privacy. Every voter configurable option is automatically reset to its default value with the initiation of each new voting session.

Voters are able to review, verify and correct their selections prior to printing their ballot, by audio and/or visual means. Voters are warned if they have missed, or undervoted a contest, and have the opportunity to go back and correct their selections. Once the ballot is printed, the voter scans their ballot on the ImageCast Precinct, the same as all other voters.

Deployed widely across California, Nevada, Colorado and Michigan, the ImageCast X has received the highest usability ranking by in-person voters with disabilities. The ImageCast X features the latest technological advances in accessible voting technology, providing more options for voters with accessibility needs to vote privately and independently.



Voters can adjust the rate and volume of their audio ballot.

Section 5 – Ballot Marking Device (BMD)

File 5-2 BMD Validation

5.2 Describe any software/firmware validation tools built into the device for use in installation, pre-election, and post-election testing to verify that software/firmware has not been modified.

Democracy Suite integrates a role-based access control system for all software and hardware components. Each user accessing the system is the member of one of the predefined or custom-made roles. Each role has its own set of permissions, or actions that users of that role are allowed to perform. This access control approach provides authentication and authorization services and can be granular according to the jurisdiction's needs and organization. Complete user and role membership management is integrated within the Democracy Suite EMS Election Event Designer client module.

Further, the ImageCast X protects against unauthorized access or loading of malicious firmware by requiring two-factor authentication for all technician and pollworker menus. In order to gain access, a user must have a valid Technician or Pollworker card and enter an authorized username and password.

As previously detailed, all products in the Democracy Suite platform follow best software and application development practices, including additional source code quality and security procedures. All software programs satisfy recommended coding standards, as well as code styling guidelines as required by EAC VVSG standards. Automated code review processes are in place, that verify compliance with industry accepted coding standards for programming languages. In addition, proper system and software hardening procedures are clearly defined and regularly tested. Testing is performed on the lower source code level using code analysis tools, and at the system level using Nessus vulnerability testing tool. Data integrity and confidentiality is implemented according to NIST defined and FIPS validate procedures and algorithms.

All the code is stored in a secure manner within our organization and regularly backed up. Dominion's IT personnel further improve overall security through the usage of firewalls, intrusion detection/prevention systems, comprehensive employee training, and company-wide security policies. Continuous integration is performed on a daily basis

along with in-depth testing, which maintains constant code quality. Documentation covers recommended secure configuration scenarios from securing host operating systems (by using antivirus software, firewall configuration, hardening scripts, performing regular updates, and being in an isolated environment) through encryption of application communication mechanisms, hard disk encryption, and election file encryption. Voting locations are physically secured by trained professionals, machines (tabulators) are locked down from modification through the use of appropriate seals and are uniquely identifiable by having appropriate certificates stored for use in authentication.

Dominion uses multi-level assurance and quality control processes to ensure that all elements of our integrated voting system perform properly with every use. Internal acceptance testing is performed on each voting system on receipt from the manufacturer. By the time our products are purchased by the customer, they have gone through three full rounds of acceptance testing. Independent reviews of election databases are conducted to prior Logic and Accuracy testing. We recommend (and support our customers to conduct) precinct-level pre-election testing.

In addition to this rigorous testing and control program designed to catch errors, Dominion Voting regularly conducts process audits of our acceptance testing, and programming processes to ensure that errors never occur.

Section 5 – Ballot Marking Device (BMD)

File 5-3 BMD Transition

5.3 Describe how the proposed BMDs transition from Absentee In-Person voting to Election Day use.

Transitioning from Absentee In-Person voting to Election Day use would simply require the Election Administrator to re-zero the election counter before opening the poll on election day. All Logic and Accuracy Testing results will remain valid. Additionally, all tabulation of results from BMD ballots processed and scanned during the Absentee In-Person voting period and Election Day voting would be accurately tabulated based on the ballots cast and accounted for in the Statement of Votes Cast and Election Summary Reports.

Section 5 – Ballot Marking Device (BMD)

File 5-4 BMD Ease of Use

5.4 Ease of Use for Local Election Officials and Voters: Provide and demonstrate customer experiences via referrals and specific case studies or white papers including access, special features, and any other customer feedback.

Dominion works with more than 3,000 entities across North America to provide elections services, software and hardware. We pride ourselves on the partnership that we strive to build with each customer.

In addition to the references we provide in response to 0-7 References, we would like to offer several letters of reference from larger entities that are currently utilizing Democracy Suite and a similar product array as we are proposing in Georgia. Letters from Sacramento County and Contra Costa County, California will provide a high-level overview of the success we have experienced through the implementation and use of our system.

As letters can only provide a snapshot of the user experience, we would also like to provide several links to several testimonial videos produced in conjunction with our customers in the City and County of Denver, and Clark County, Nevada. We feel these video testimonials provide a picture of the type of partnership we commit to developing.

City and County of Denver:

https://www.youtube.com/watch?v=Zyqg-LcAkC0

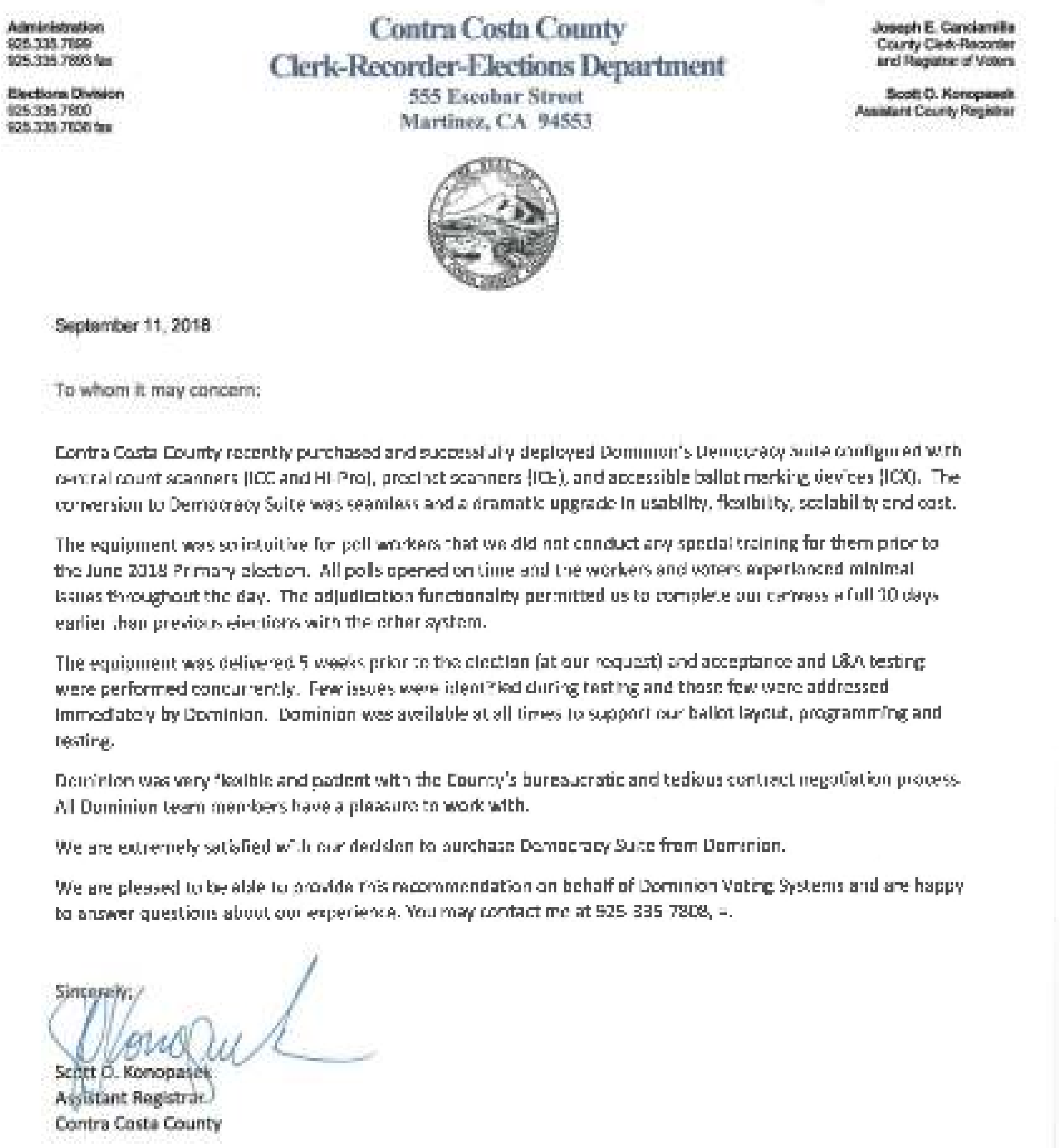
Clark County Video #1 -2018

https://www.youtube.com/watch?v=WejC40bgvic

Clark County Video #2 – 2017

https://youtu.be/j9TsDwsHVPA

Letters of reference provided on the following pages:



Administration
925.335.7899
925.335.7893 fax

Elections Division
925.335.7800
925.335.7836 fax

Contra Costa County
Clerk-Recorder-Elections Department
555 Escobar Street
Martinez, CA 94553

Joseph E. Canciamilla
County Clerk-Recorder
and Registrar of Voters

Scott O. Konopasek
Assistant County Registrar

September 11, 2018

To whom it may concern:

Contra Costa County recently purchased and successfully deployed Dominion's Democracy Suite configured with central count scanners (ICC and Hi-Pro), precinct scanners (ICE), and accessible ballot marking devices (ICX). The conversion to Democracy Suite was seamless and a dramatic upgrade in usability, flexibility, scalability and cost.

The equipment was so intuitive for poll workers that we did not conduct any special training for them prior to the June 2018 Primary election. All polls opened on time and the workers and voters experienced minimal issues throughout the day. The adjudication functionality permitted us to complete our canvass a full 10 days earlier than previous elections with the other system.

The equipment was delivered 5 weeks prior to the election (at our request) and acceptance and L&A testing were performed concurrently. Few issues were identified during testing and those few were addressed immediately by Dominion. Dominion was available at all times to support our ballot layout, programming and testing.

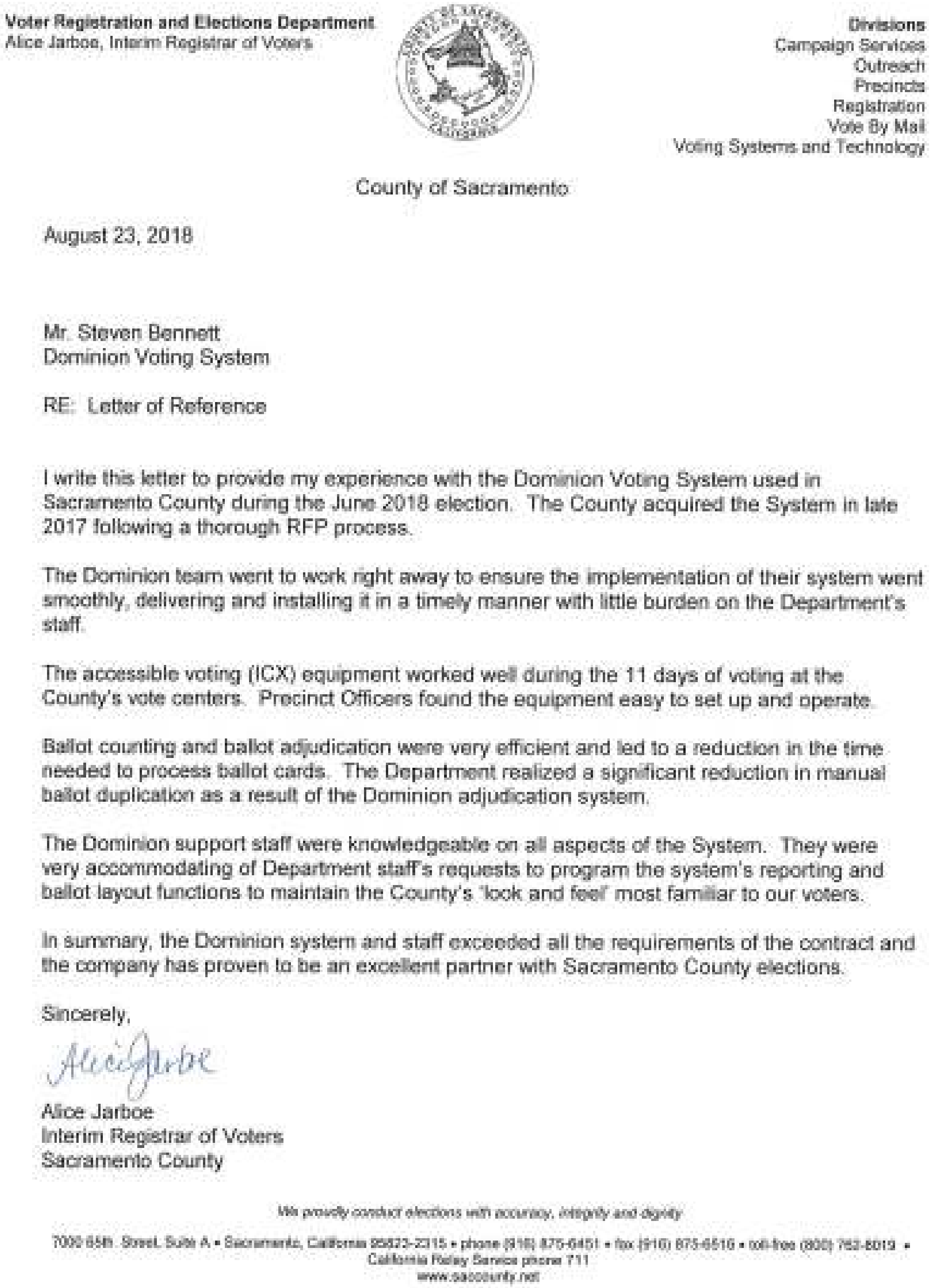
Dominion was very flexible and patient with the County's bureaucratic and tedious contract negotiation process. All Dominion team members have a pleasure to work with.

We are extremely satisfied with our decision to purchase Democracy Suite from Dominion.

We are pleased to be able to provide this recommendation on behalf of Dominion Voting Systems and are happy to answer questions about our experience. You may contact me at 925-335-7808, =.

Sincerely,

Scott O. Konopasek
Assistant Registrar
Contra Costa County



Voter Registration and Elections Department
Alice Jarboe, Interim Registrar of Voters

Divisions
Campaign Services
Outreach
Precincts
Registration
Vote By Mail
Voting Systems and Technology

County of Sacramento

August 23, 2018

Mr. Steven Bennett
Dominion Voting System

RE: Letter of Reference

I write this letter to provide my experience with the Dominion Voting System used in Sacramento County during the June 2018 election. The County acquired the System in late 2017 following a thorough RFP process.

The Dominion team went to work right away to ensure the implementation of their system went smoothly, delivering and installing it in a timely manner with little burden on the Department's staff.

The accessible voting (ICX) equipment worked well during the 11 days of voting at the County's vote centers. Precinct Officers found the equipment easy to set up and operate.

Ballot counting and ballot adjudication were very efficient and led to a reduction in the time needed to process ballot cards. The Department realized a significant reduction in manual ballot duplication as a result of the Dominion adjudication system.

The Dominion support staff were knowledgeable on all aspects of the System. They were very accommodating of Department staff's requests to program the system's reporting and ballot layout functions to maintain the County's 'look and feel' most familiar to our voters.

In summary, the Dominion system and staff exceeded all the requirements of the contract and the company has proven to be an excellent partner with Sacramento County elections.

Sincerely,

Alice Jarboe

Alice Jarboe
Interim Registrar of Voters
Sacramento County

We proudly conduct elections with accuracy, integrity and dignity

7000 65th Street, Suite A • Sacramento, California 95823-2315 • phone (916) 875-6451 • fax (916) 875-6516 • toll-free (800) 762-8019 •
California Relay Service phone 711
www.saccounty.net

File 5-5 BMD Environment

5.5 Describe the impact of environmental factors on ballot printing related to BMDs. Describe if the printed surface of the paper ballot produced by a BMD is subject to smearing, erasure, or other intentional or accidental environmental factors such as water, oils from human skin, or other elemental substances one might find in an election office, warehouse, or polling location.

The ImageCast X is paired with the HP LaserJet Pro M402dne as the in-booth printer used to print the voter's selections, which is tabulated and acts as the paper audit trail.

As such, Laserjet printers use a solid material, called toner, to form the page images. Once the toner is stuck to the page inside the printer with an electric charge, the page passes through a special heated roller, called a fuser. The fuser melts the toner onto the paper at temperatures as high as 400 degrees so that it is unlikely to melt off the paper in the future. This process produces a high-quality output that will not smear or smudge and have a long lifetime when properly stored to avoid long-term direct sunlight.

File 5-6 BMD ADA

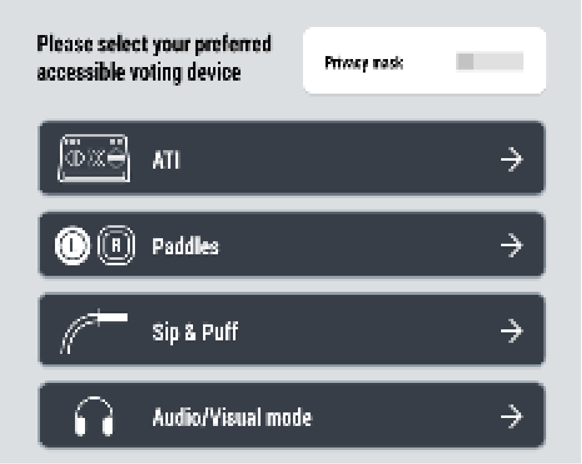
5.6 Describe how the proposed BMD will support ADA accessibility.

The ImageCast X can be placed on a voting booth or table designed for compliance with ADA accessibility.

As detailed in response to item 5-1 BMD, the unit was designed as a voting solution for all, the ImageCast X also offers several options for voters with accessibility needs to vote in a private and independent manner. The ImageCast X offers the following user interfaces:

- Visual mode: Voter navigates their ballot using one of the available accessibility tools and the visual display
- Audio mode: Visual display can be disabled, and the voter uses headphones to navigate an audio ballot using one of the available accessibility tools
- Visual & audio mode: Voter navigates their ballot using one of the available accessibility tools, the visual display, and the audio ballot

In addition to the touchscreen functionality, the ImageCast X is compatible with a range of accessibility tools that voters can use to navigate through the ballot and make their selections. The system is compatible with commercially available accessibility devices, such as a four-way joystick, as well as a hand-held controller called the Audio Tactile Interface (ATI), sip and puff device, or paddle device.



Please select your preferred accessible voting device

The ImageCast X is compatible with a range of accessibility tools and can present the ballot in audio only, visual only or both audio/visual mode.

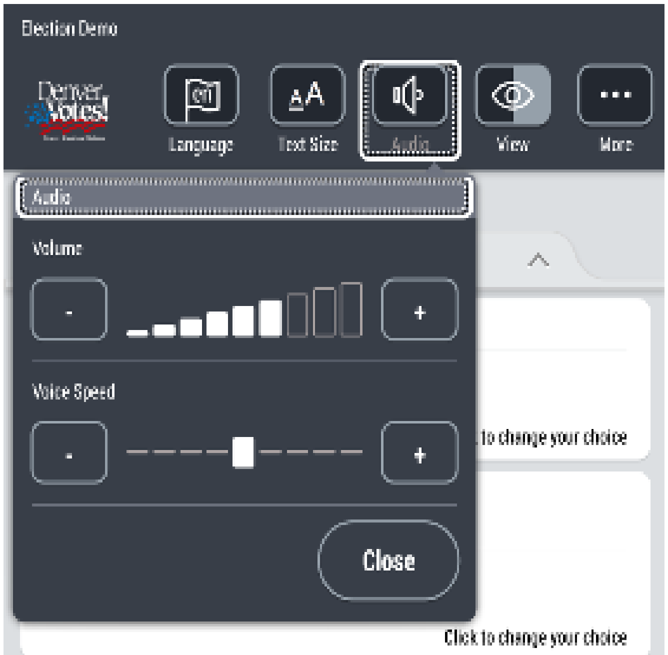
The Audio Tactile Interface (ATI) is the handheld device that is used by a voter during an Accessible Voting Session to navigate through and make selections to their ballot. The ATI:

- Has raised keys that are identifiable tactilely without activation (i.e. raised buttons of different shapes and colors, large or Braille numbers and letters)
- Can be operated with one hand
- Includes a 3.5 mm headphone jack
- Includes a T-Coil coupling
- Has a T4 rating for interference
- Uses light pressure switches
- Can be equipped with a pneumatic switch, also known as a sip and puff device, or a set of paddles.

The ImageCast X can present the ballot in audio only, visual only, or both audio and visual modes, depending on personal preference. Voters can adjust the rate and volume of their audio ballot, as well as the text size and contrast of the display, or disable the display entirely for added privacy. Every voter configurable option is automatically reset to its default value with the initiation of each new voting session.

Voters are able to review, verify and correct their selections prior to printing their ballot, by audio and/or visual means. Voters are warned if they have missed, or undervoted a contest, and have the opportunity to go back and correct their selections. Once the ballot is printed, the voter scans their ballot on the ImageCast Precinct, the same as all other voters.

Deployed widely across California, Nevada, Colorado and Michigan, the ImageCast X has received the highest usability ranking by in-person voters with disabilities. The ImageCast X features the latest technological advances in accessible voting technology, providing more options for voters with accessibility needs to vote privately and independently.



Voters can adjust the rate and volume of their audio ballot.

Vendor:

Attachment M - EPoll Data Management System

EPoll Data Management System (EPDMS) – Used to combine voter registration and election ballot data into an election-specific elector's list that powers the electronic poll book (EPoll) and provides each voter with the properly assigned ballot style. **Describe all answers regarding your EPDMS solution. The EPDMS solution shall:**	**CONFIRM THAT CAPABILITY EXISTS AND IS ABLE TO BE DEMONSTRATED**	**KEY FUNCTIONALITY AND SYSTEM CAPABILITY** KNOWiNK confirms it's electronic poll book solution—Poll Pad—has existing key functionalities and system capabilities. We look forward to demonstrating the Poll Pad as part of this RFP process for the Statewide voting system.

Capabilities		
a. Accept imports of voter registration data from eNet on removable memory devices for the purposes of building an elector's list for any given election. The data transferred from eNet includes but is not limited to:	**YES** ☒ **NO** ☐	
• Voter Name (First, Middle, Last, Suffix)	**YES** ☒ **NO** ☐	
• Voter Street Address	**YES** ☒ **NO** ☐	
• Voter City, State, Zip	**YES** ☒ **NO** ☐	
• Driver License number	**YES** ☒ **NO** ☐	
• Voter Registration ID	**YES** ☒ **NO** ☐	
• Voter Status	**YES** ☒ **NO** ☐	
• Assigned Precinct	**YES** ☒ **NO** ☐	
• Assigned District Combination Value	**YES** ☒ **NO** ☐	
• Assigned Polling Place	**YES** ☒ **NO** ☐	
• Polling Place Street Address	**YES** ☒ **NO** ☐	
• Polling Place City, State, Zip	**YES** ☒ **NO** ☐	
• Absentee Status	**YES** ☒ **NO** ☐	
b. Accept imports of election ballot data from the proposed EMS on removable memory devices for the purposes of building an elector's list for any given election. The data transferred from the	**YES** ☒ **NO** ☐	

Vendor:

Attachment M - EPoll Data Management System

EPoll Data Management System (EPDMS) – Used to combine voter registration and election ballot data into an election-specific elector’s list that powers the electronic poll book (EPoll) and provides each voter with the properly assigned ballot style. **Describe all answers regarding your EPDMS solution. The EPDMS solution shall:**	**CONFIRM THAT CAPABILITY EXISTS AND IS ABLE TO BE DEMONSTRATED**	**KEY FUNCTIONALITY AND SYSTEM CAPABILITY**

proposed EMS is expected to include, but is not limited to:		
• Precincts	**YES** ☒ **NO** ☐	
• Polling Places	**YES** ☒ **NO** ☐	
• District Combination Values	**YES** ☒ **NO** ☐	
• Ballot Styles	**YES** ☒ **NO** ☐	
c. Generate reports that provide user guidance in the preparation of the elector’s list.	**YES** ☒ **NO** ☐	
d. Generate and encrypt elector list data and update files that can be extracted using removable memory devices and transferred to the EPoll solution. Describe how encrypted files are transferred to and from EPoll solution.	**YES** ☒ **NO** ☐	
e. Collect activity or transaction logs generated by EPoll at the conclusion of the election.	**YES** ☒ **NO** ☐	
f. Use collected activity or transaction logs from EPoll to generate Numbered Lists of Voters in a format that can be securely transmitted to a jurisdiction and then printed locally.	**YES** ☒ **NO** ☐	
g. Use collected activity or transaction logs from EPoll to provide an update of voter history back to eNet.	**YES** ☒ **NO** ☐	

Vendor:

Attachment M - EPoll Data Management System

EPoll Data Management System (EPDMS) – Used to combine voter registration and election ballot data into an election-specific elector's list that powers the electronic poll book (EPoll) and provides each voter with the properly assigned ballot style. **Describe all answers regarding your EPDMS solution. The EPDMS solution shall:**	**CONFIRM THAT CAPABILITY EXISTS AND IS ABLE TO BE DEMONSTRATED**	**KEY FUNCTIONALITY AND SYSTEM CAPABILITY**
h. Describe the expected amount of time needed to complete a single dataset containing all voters and all ballot styles (7.1 million voters, with 159 election databases, with 3300 precincts).	**YES** ☒ **NO** ☐	
i. Be virtualized to run on GASOS and county virtual operating system (OS) environments.	**YES** ☒ **NO** ☐	

Vendor:

Attachment M - EPoll Data Management System

EPoll Data Management System (EPDMS) – Used to combine voter registration and election ballot data into an election-specific elector's list that powers the electronic poll book (EPoll) and provides each voter with the properly assigned ballot style. **Describe all answers regarding your EPDMS solution. The EPDMS solution shall:**	**CONFIRM THAT CAPABILITY EXISTS AND IS ABLE TO BE DEMONSTRATED**	**KEY FUNCTIONALITY AND SYSTEM CAPABILITY**

Narrative:

a. The Poll Pad supports all voter registration data listed. Using a removable memory device, the GASOS and Counties may import voter registration into ePulse, KNOWiNK's election management system. ePulse is used to build elections and creates the file with the voter registration and election details to load onto the Poll Pads for voter in early Absentee in-person voting and on Election Day. From ePulse, the file is loaded onto KNOWiNK's proprietary iSync drives and then loaded onto the Poll Pads. The data is encrypted at rest and in transit on the iSync drive. It securely connects to the iPad using the Lightning port.

b. Using voter registration data and election ballot data, ePulse automatically identifies the correct ballot style for each voter. The data can be imported in compliance with this requirement from ePulse to the iSync flash drives for any given election. The system complies with this requirement and automatically assigns election ballot data to the voter based on data gathered from Georgia's voter registration system (eNet). Precinct assignment of the Poll Pad appears at the top right of the status banner and is displayed continuously throughout an election period. The Poll Pad can accommodate numerous ballot styles.

c. KNOWiNK's training team prepares ePulse user guides that provide user guidance in the preparation of the elector's list, what we generally call "building an election" for Poll Pad. There are five easy steps to set up a new election and import the voter registration data. Once the election is setup and data imported, ePulse automatically parses through the data to build the election file for the Poll Pads.

d. Apple inherently blocks removable memory from being connected to an iPad. KNOWiNK has developed a secure device, known as iSync, that allows for encrypted data transfer to and from the Poll Pad application. iSync is approved by Apple as secure. All data loaded to the Poll Pads and iSync drives is encrypted in transit and at rest. Elector list data and update files can be extracted from the Poll Pad and put onto the iSync drives. In order to connect to our application, the device has been certified by Apple and issued a certificate by Apple that allows it to communicate with the Poll Pad application. All data included on the iSync drive is fully encrypted using 256 bit AES encryption and is validated by a certificate stored on the keychain of the iOS device. While iSync is available and can make the Poll Pad easier to use, especially when a quick and reliable network connection is not available, it is not required for use if connectivity is available. With connectivity, the Poll Pad application can be loaded onto the iPads from ePulse.

e. All activity on the Poll Pads is collected in comprehensive audit logs and can be accessed on the Poll Pad itself, or can be accessed via our EPDMS, ePulse, which can view and export the audit logs in multiple common file types to provide a report. The audit logs are in the locked Tools and Settings menu on the Poll Pad so only administrators or election workers with the proper authority may access.

f. Reports of collected transaction activity logs from the Poll Pad can generate a Numbered List of Voters according to this requirement. This list can be securely transmitted and printed locally at any point during an election event. ePulse provides robust reporting of voter check-in data. Sample reports are attached in the Appendix.

g. When deployed without connectivity, Poll Pads collect transaction logs throughout an election period with auditable time-stamps. After the close of an election, data can be loaded to the iSync flash drives and delivered to the central office to be uploaded to eNet to provide an update of voter history.

h. Upload time of voter registration data and ballot styles for 7.1 million voters from the ePulse EPDMS to the Poll Pads averages between ten and 15 minutes. If the files are uploaded from the EPDMS to the Poll Pad via iSync flash drives, the file transfer process will likely take even less time. If the State decides at a future time to deploy Poll Pads with connectivity, the speed of the upload depends on the strength of the network connection. KNOWiNK provides devices to provide or boost a WiFi signal, if the State desires to implement with network connectivity in the future.

i. The ePulse EPDMS is a web-based system that operates on all major browsers. All ePulse modules including iTrack Asset management, Issue Tracker, poll worker time tracker and others are able to run on GASOS virtual OS environments and is compatible with both Windows and Mac devices with minimal performance requirements. iTrack Assets and Issues come with secure mobile applications for technicians to use to view, report and assign real time issues as they arise on election day. Other than the requirement of the iPads to operate the Poll Pad application, the GASOS and its Counties can likely use existing computers for all ePulse election administration functions.

Section 6 – EPoll Data Management System (EPDMS)

File 6-2 EPDMS Media

6.2 Describe how election configuration information is loaded. Is it done via encrypted, removable memory devices created by the EPDMS or through direct a connection to EPDMS through a LAN?

ePulse, KNOWiNK's EPDMS, provides the option of using iSync encrypted removable memory devices, transferring the data via network connectivity from the central GASOS office or a LAN connection to securely transfer election configuration information from ePulse to the Poll Pad. In ePulse, an election administrator with proper credentials is provided a workflow to guide them through the process of properly uploading a voter file.

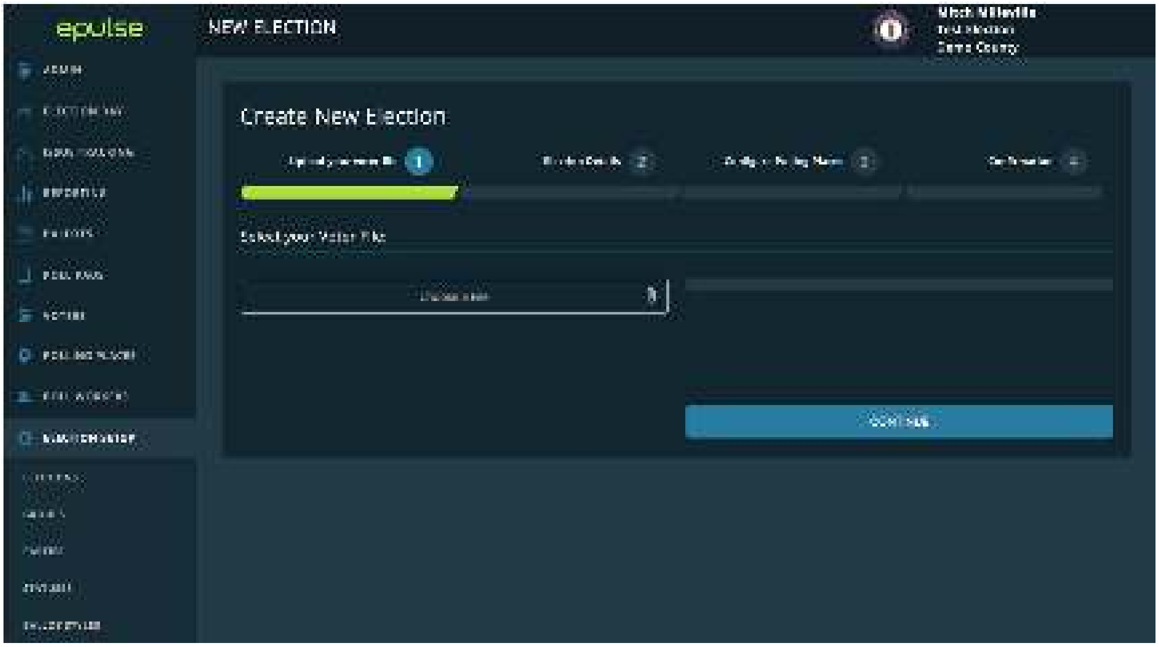


Figure 6-2-1. ePulse election file import. Once the file is selected, the user clicks Continue and the upload begins. ePulse is built to support VRS files natively, so that creating an election in the Poll Pad is completely seamless. Users are able to customize import flags such as statuses and absentee information at the State's discretion.

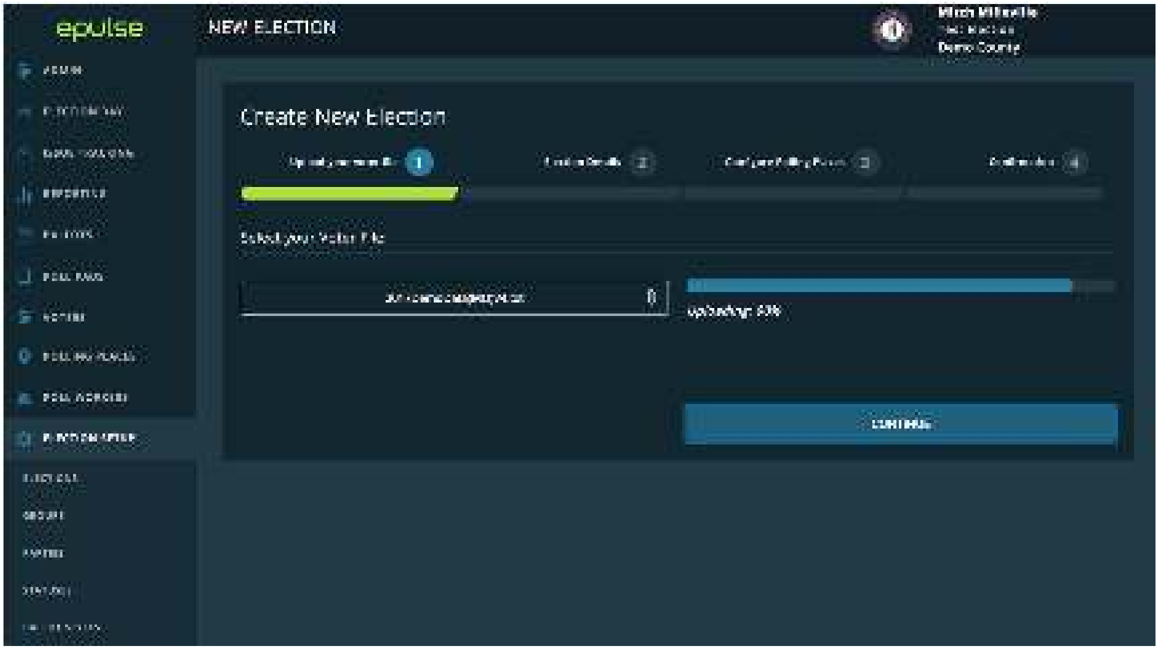


Figure 6-2-2. ePulse election file import. Once the file is selected, the user clicks Continue and the upload begins. ePulse is built to support VRS files natively, so that creating an election in the Poll Pad is completely seamless. Users are able to customize import flags such as statuses and absentee information at the State’s discretion.

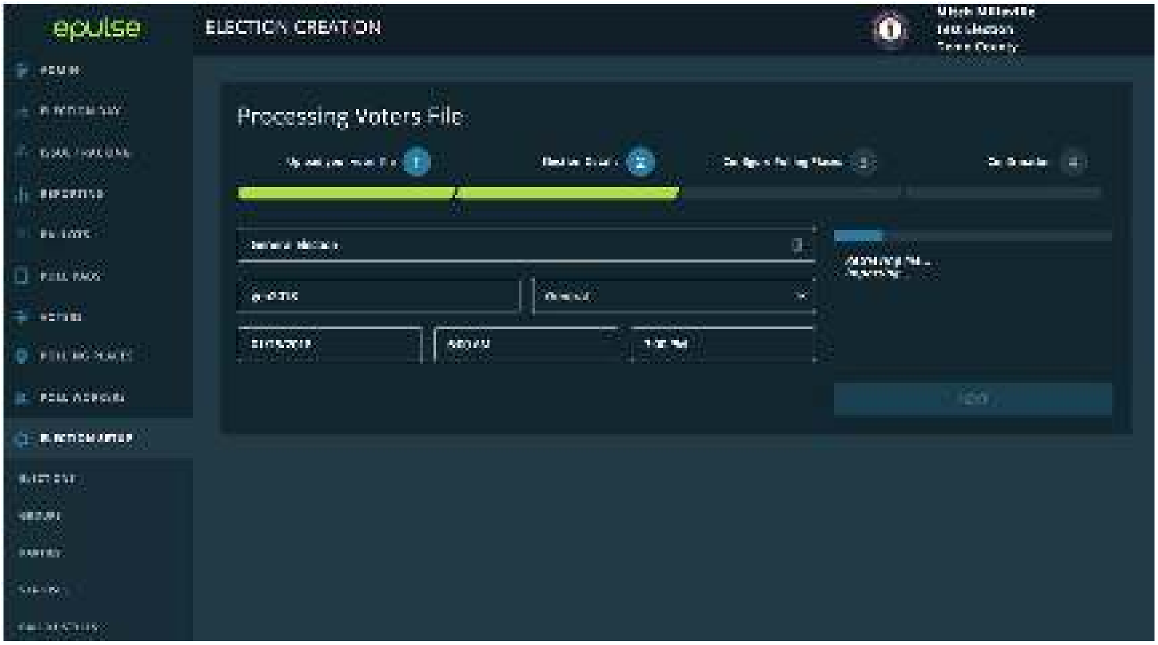


Figure 6-2-3. Election Details. The ePulse user enters in the election details, including election type, date, and poll open and closing times. This establishes the initial voter file and specific election details for your Election. Any subsequent data that is loaded will make supplemental changes to your Election and will be available to be disseminated to the Poll Pads. Supplemental updates can be distributed to the Poll Pads via wireless internet connectivity or iSync drive.

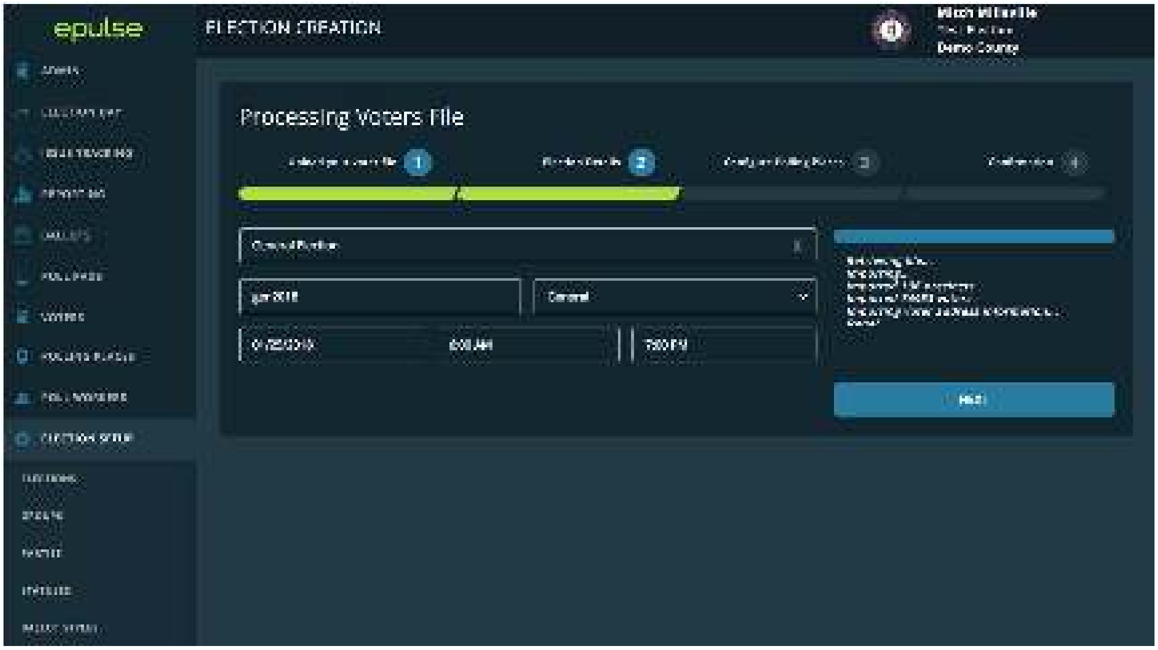


Figure 6-2-4. Election Detail Confirmation. ePulse automatically provides status updates on the imported file’s progress and verifiable statistics to ensure the data uploaded matches county records. Once complete, the user clicks Next.

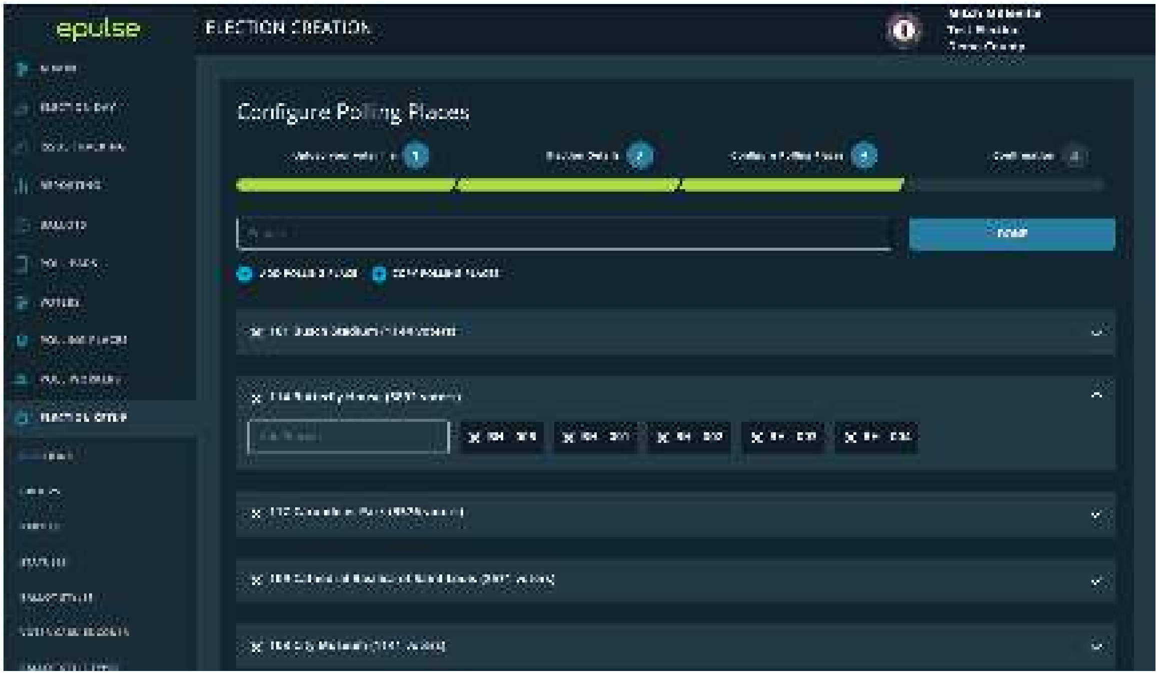


Figure 6-2-5. Configure Polling Places. The third step is reviewing the imported list of polling places. The user may customize the configuration for each Polling Place and precinct. Various combinations of polling locations can be manually added or imported in bulk into ePulse for use during an election. Vote centers, early absentee locations, or precinct specific locations are the most common types but we are also able to work with the State to set up a unique offering at your request.

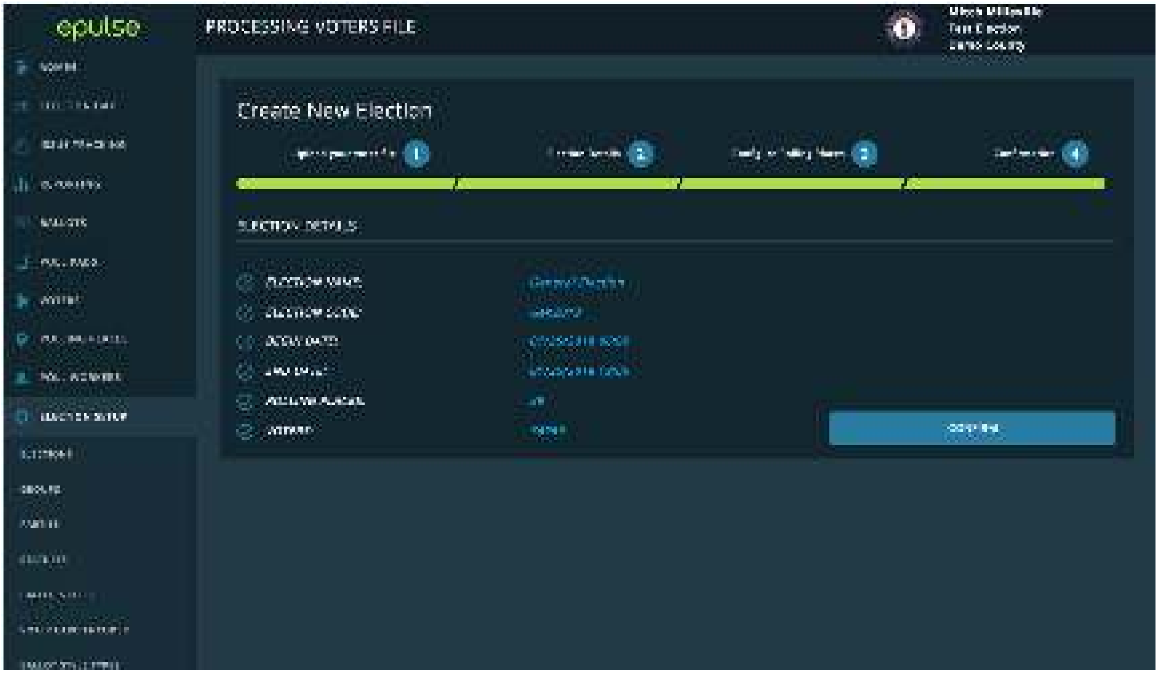
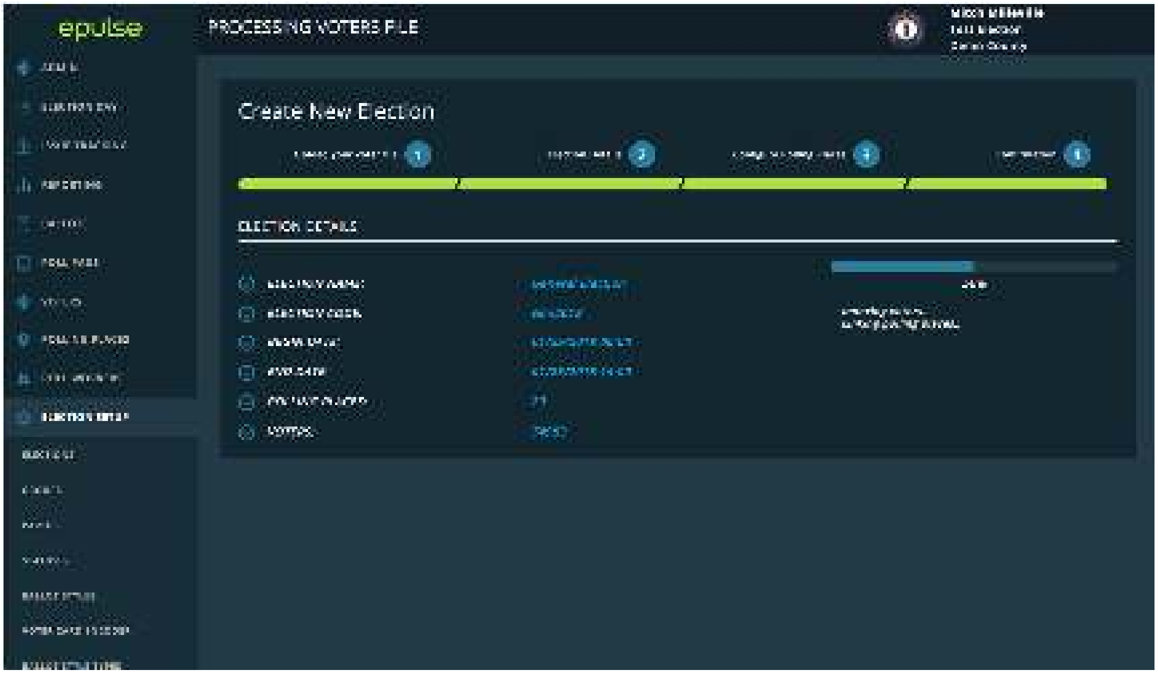


Figure 6-2-6. Election Setup Confirmation. The Confirmation page provides a summary report of the new election details. The user reviews and clicks Confirm. The Confirmation page provides a secondary summary report of the new election details and statistics for final verification. The user confirms the information displayed and clicks Confirm to finalize the initial database to be used in the Election.



6-2-7. Final Configuration. ePulse begins indexing the voters and links voter records to the correct polling places. ePulse allows the upload of supplemental data and rosters from a VRS. Once loaded, the changes enacted by the supplemental file are then disseminated to the Poll Pad application via wireless hotspot connectivity or barcode scanning for near real-time updating of voter records.

Section 6 – EPoll Data Management System (EPDMS)

File 6-3 EPDMS Validation

6.3 Describe any software/firmware validation tools built into the device for use in installation, pre-election, and post-election testing to verify that software/firmware has not been modified.

To verify that software/firmware has not been modified, the user may view the ePulse and Poll Pad audit logs, which track virtually every action on the Poll Pad.

ePulse Encrypted User Logs

Authorized ePulse users may review user logs to identify who has used and modified the system and devices, and report on the election functions performed on the system.

Poll Pad Encrypted User Logs

Every action is timestamped and included in the Poll Pad audit logs. The audit log is easy to access. The poll worker taps the left Menu icon. The poll worker then taps the “Tools and Settings” icon on the Main Menu and is prompted to enter an additional password. The logs can be exported to an encrypted and hashed file using the iSync drive.

Section 6 – EPoll Data Management System (EPDMS)

File 6-4 EPDMS Ease of Use

6.4 Ease of Use for the State and Election Official: Provide and demonstrate customer experiences via referrals and specific case studies or white papers including access, special features, and any other customer feedback.

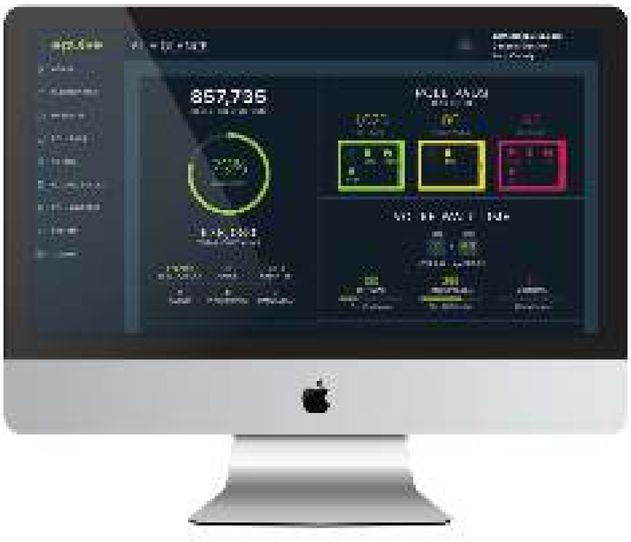
ePulse® – KNOWiNK's Central Command Back-End

ePulse is a secure web-based back-end election management system for use at the State and county level.

ePulse is an all-inclusive election management suite designed to give administrators real-time access to monitor their election as a whole. All Poll Pads connect to this central hub where voter check-in data is securely transferred via WiFi or cellular networks in near real time. This tool allows for administrators to oversee the operation of individual precincts and Poll Pads including battery life of the device, average check-in times, number of ballots issued or spoiled and more; all the while ensuring the election authority can directly contact poll workers via video or text message for speedy trouble resolution.

ePulse Capabilities

- Customizable real-time and
- election night reporting
- Ballot tracking
- Inventory tracking
- Election Day issue tracking
- Poll worker time-tracking
- Video communications from
- Poll Pads to ePulse
- Run concurrent elections
- Update voter rolls minutes before an election



ePulse election monitoring dashboard. ePulse aims to be as intuitive and user-friendly as the Poll Pads themselves. These simple-to view dashboards give the user an overview of election data essentials which can be easily digested and exported into customizable reports.

ePulse has numerous modules that give each County a complete view to manage elections. The following pages highlight the major Poll Pad features and ePulse modules that come with the Poll Pad solution.

> “The Poll Pad solution and KNOWiNK customer service consistently meet Denton County’s unique needs. ePulse allows us to change a voter from one ballot style to another, a feature we could not do with our previous system. We highly recommend KNOWiNK’s Poll Pad solution.”
>
> – Frank Phillips, Election Administrator, Denton County, Texas

ePulse is easy to use and can be taught to county officials and GASOS personnel is a half-day or less.

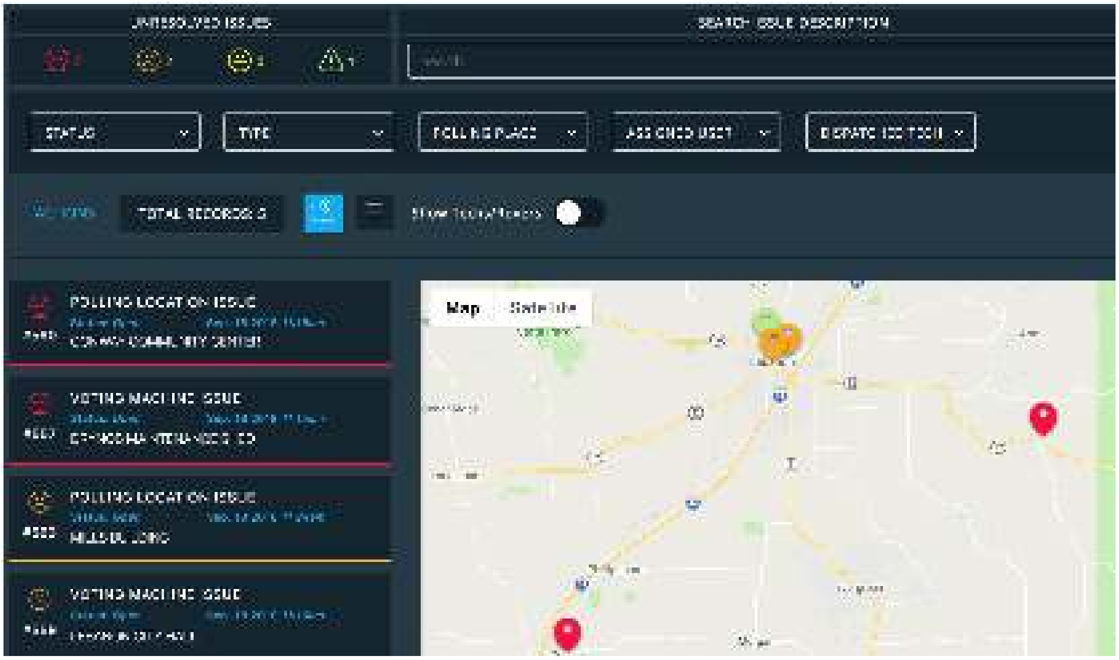
Special features of ePulse and specific use cases are shown on the following pages.

ePulse Module: iTrack Issue Tracking

ePulse provides a method to assign election incident reports to help desk technicians and track their resolution. iTrack is a module built into ePulse and is divided into incident tracking and incident viewing/reporting. Reporting an incident allows the user to assign incidents to specific technicians, as well as detail what devices were affected by the incident, in which polling location or vote center, and whether the incident is open, pending, or closed. Issue creation, updates, and close are all timestamped, and the user that performed each event is logged in the system. iTrack allows for a method to track technicians and their GPS coordinates via a smartphone application that runs on iOS and Android operating systems.

KNOWiNK provides in-depth training and troubleshooting guides for in-office tech support and on-site personnel. Tech support personnel in the election office access the iTrack Issue Tracking system to log issues, assign them to devices and poll workers, and deploy techs out to the field to resolve incidents on-site. Using iTrack, Tech Support can communicate with poll workers via text messaging and video chat to get a first-hand understanding of what the poll worker is encountering. iTrack is available in ePulse on a web browser and as a mobile application.

Figure 3. Issue Tracking Screenshots



Figures 3.1 and 3.2. iTrack Issue Tracking Screenshots. Birds Eye View and Summary of Incidents.

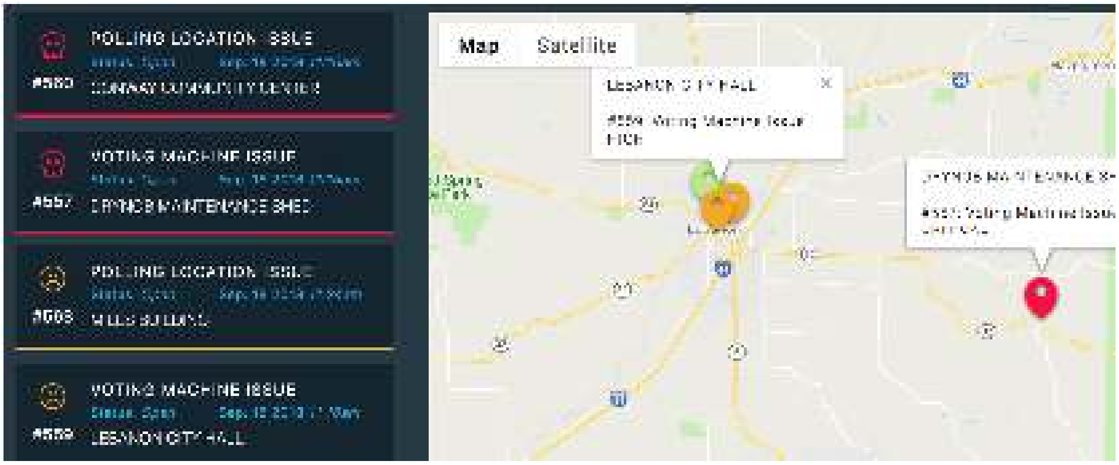
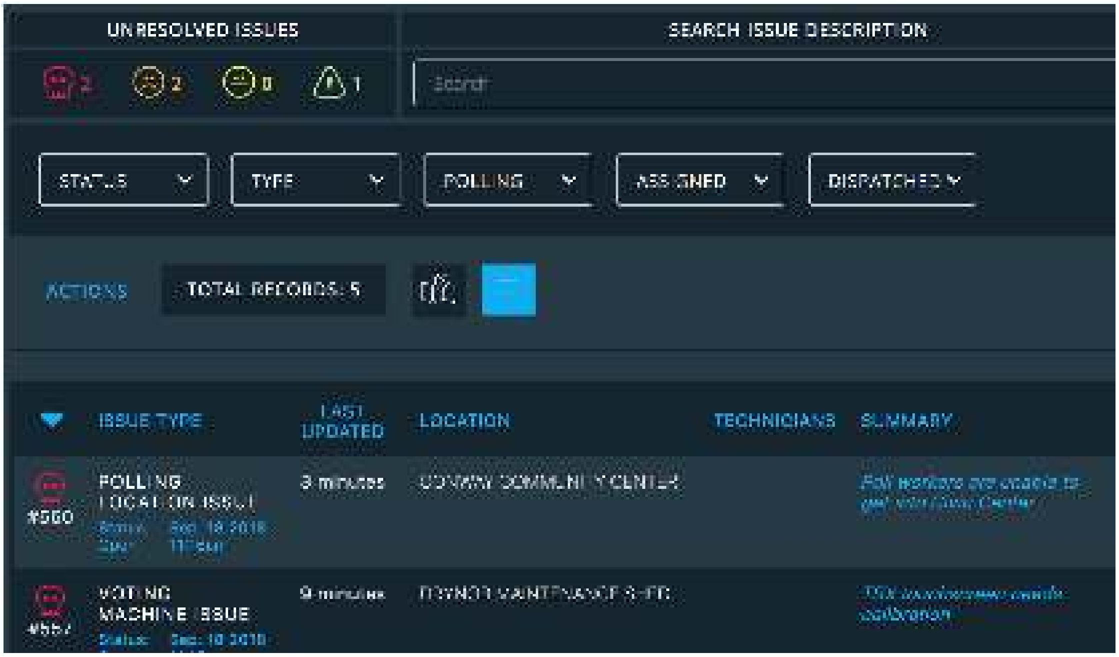
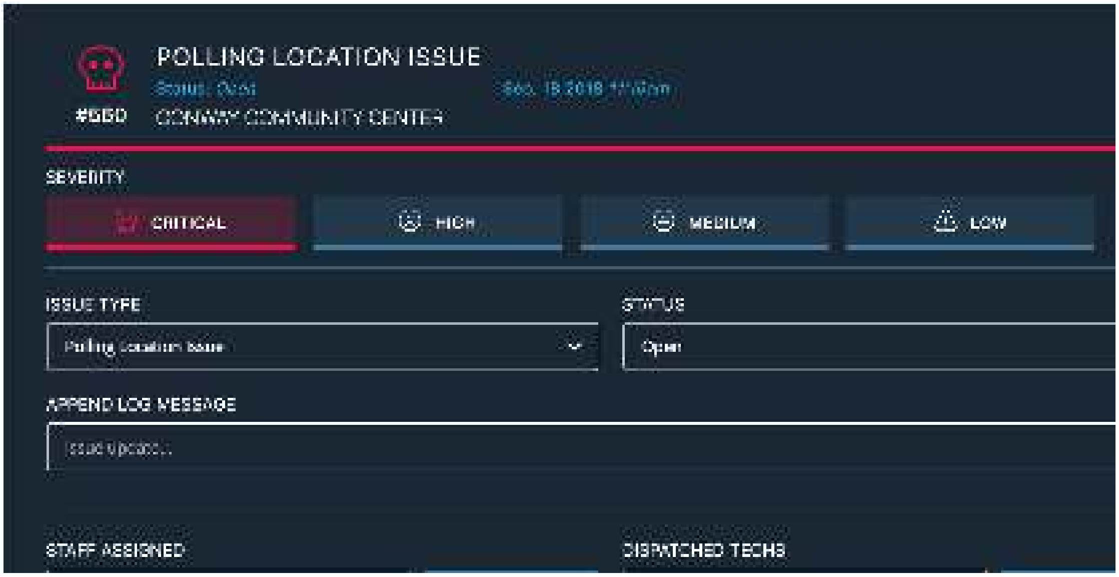


Figure 3.3. iTrack Issue Tracking Screenshots. List view of incidents.



	ISSUE TYPE	LAST UPDATED	LOCATION	TECHNICIANS	SUMMARY
#560	POLLING LOCATION ISSUE Status: Open Sep. 18 2018 11:15am	3 minutes	CONWAY COMMUNITY CENTER		Poll workers are unable to get into Conway Center
#557	VOTING MACHINE ISSUE Status: Sep. 18 2018	9 minutes	TOYNOR MAINTENANCE SHED		TSX touchscreen needs calibration

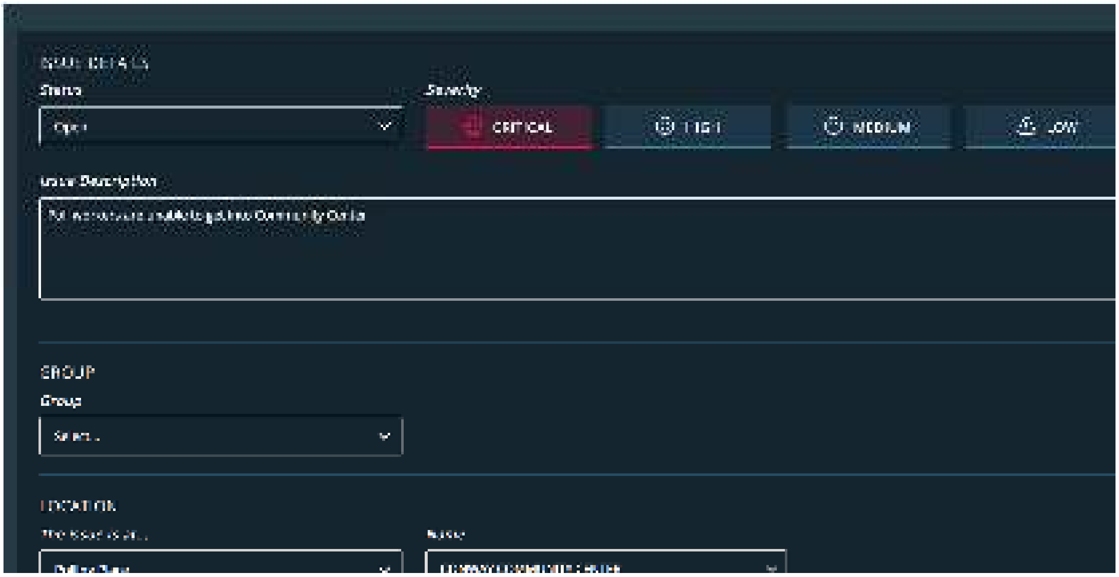
Figure 3.4. iTrack Issue Tracking Screenshots. Adding or editing an incident.


POLLING LOCATION ISSUE
Status: Open
Sep. 18 2018 11:19am
#560
CONWAY COMMUNITY CENTER

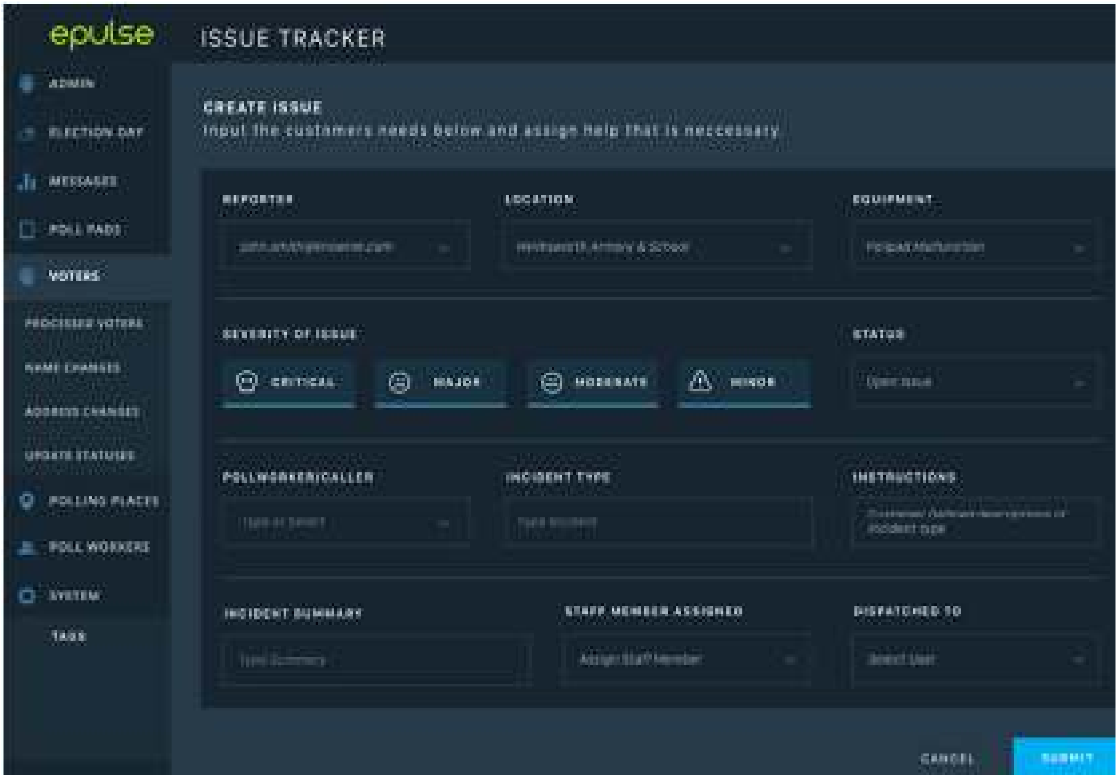
SEVERITY

ISSUE TYPE: Polling Location Issue
STATUS: Open
APPEND LOG MESSAGE: Issue Update...
STAFF ASSIGNED
DISPATCHED TECHS

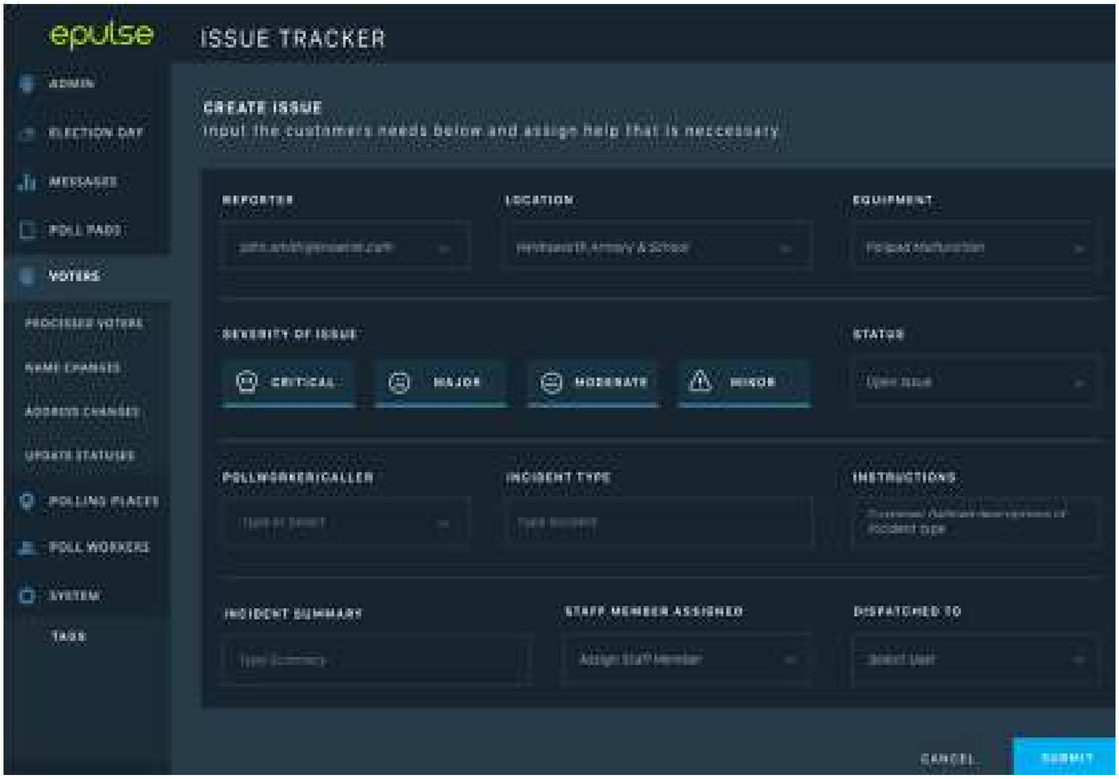
Figures 3.5. iTrack Issue Tracking Screenshots. Adding or editing an incident.



Figures 3.6. iTrack Issue Tracking Screenshots. Adding or editing an incident.



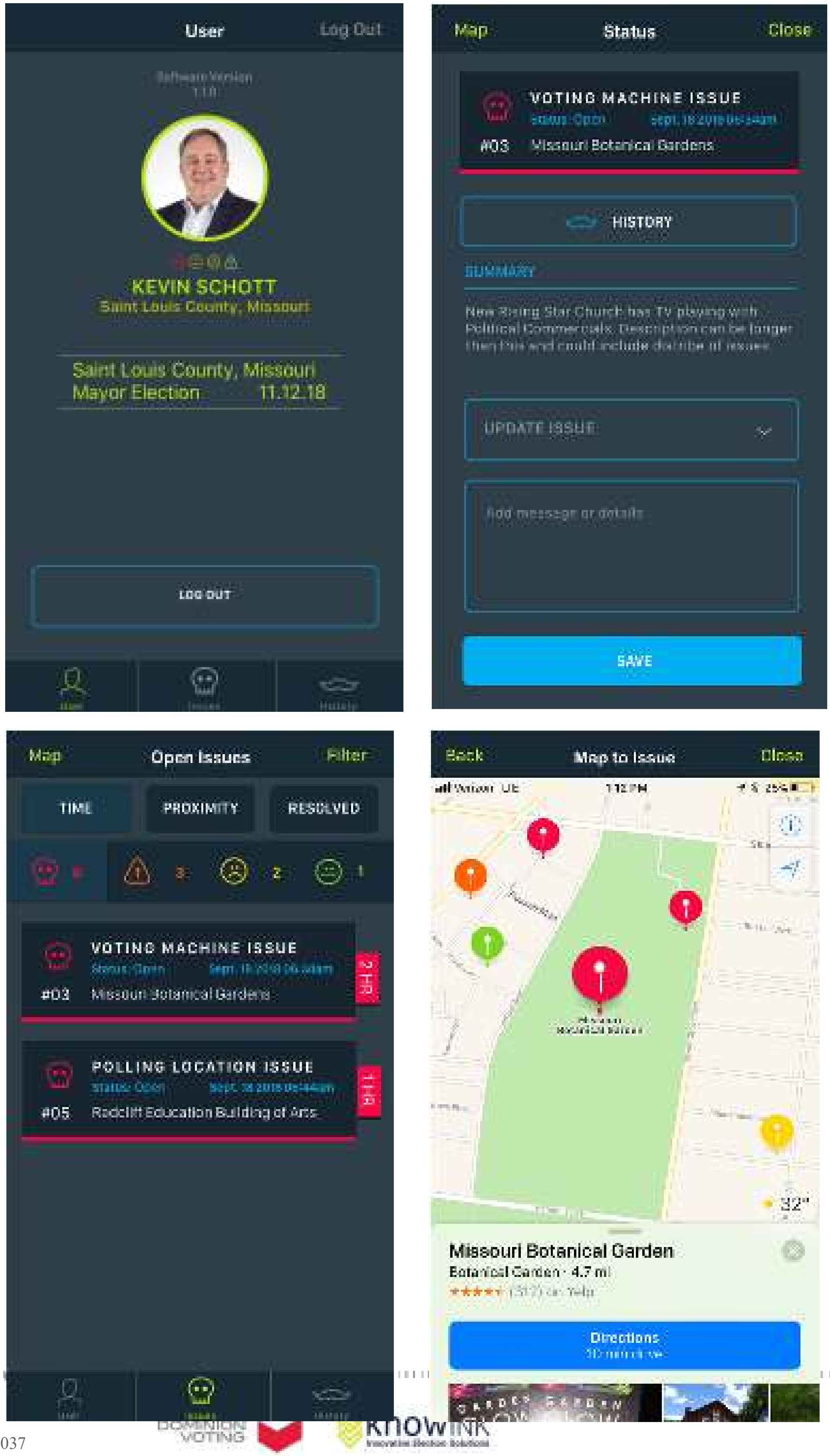
Figures 3.7. iTrack Issue Tracking Screenshots. Adding or editing an incident.



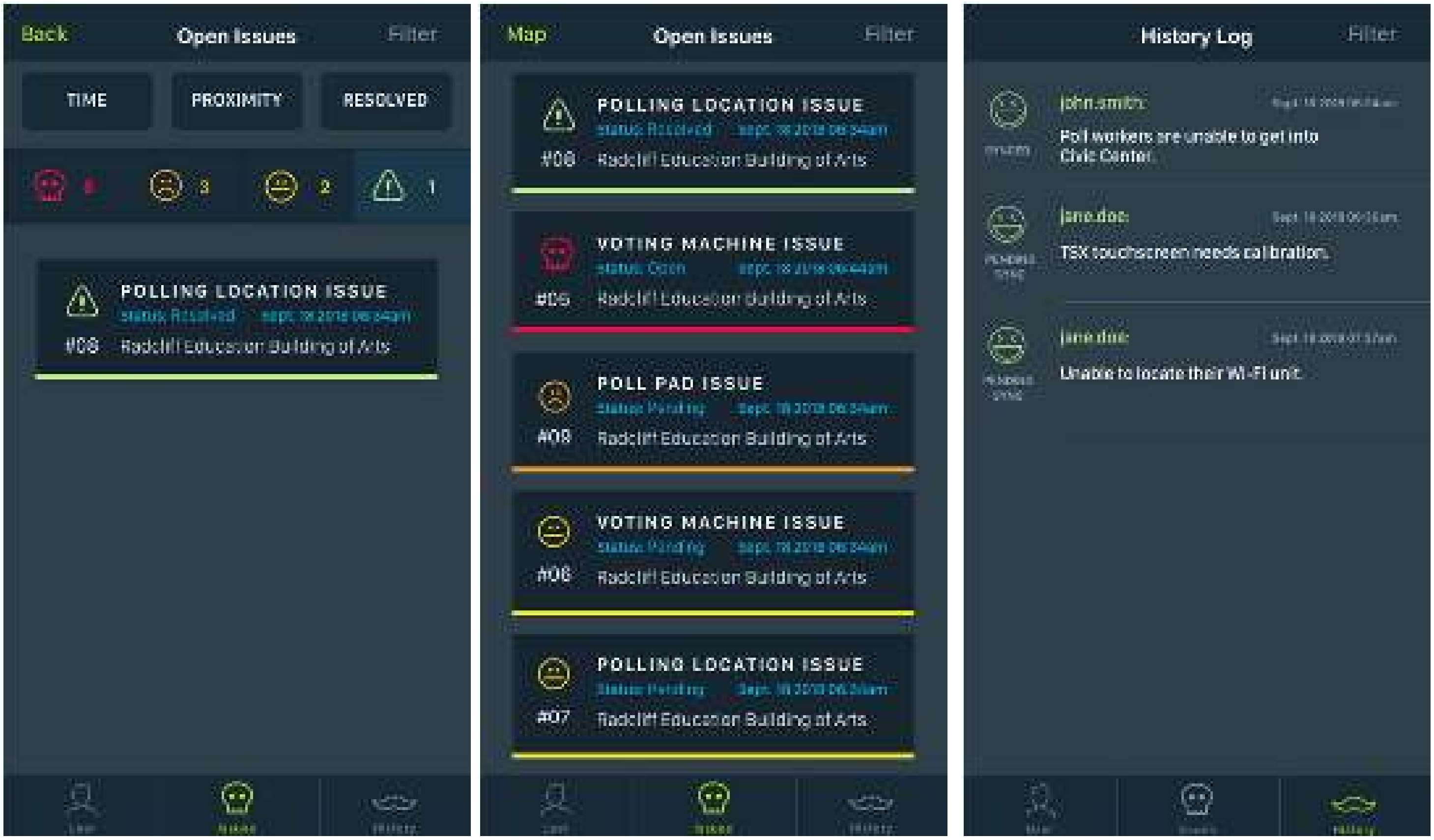
CREATE ISSUE

Input the customers needs below and assign help that is neccessary

Figure 4.1. iTrack Mobile Application Screenshots.



New Rising Star Church has TV playing with Political Commercials. Description can be longer then this and could include discribe of issues.



POLLING LOCATION ISSUE
Status: Resolved
#08 Radcliff Education Building of Arts

POLLING LOCATION ISSUE
Status: Resolved
#08 Radcliff Education Building of Arts

VOTING MACHINE ISSUE
Status: Open
#05 Radcliff Education Building of Arts

POLL PAD ISSUE
Status: Pending
#09 Radcliff Education Building of Arts

VOTING MACHINE ISSUE
Status: Pending
#06 Radcliff Education Building of Arts

POLLING LOCATION ISSUE
Status: Pending
#07 Radcliff Education Building of Arts

john.smith:
Poll workers are unable to get into Civic Center.

jane.doe:
TSX touchscreen needs calibration.

jane.doe:
Unable to locate their Wi-Fi unit.

Figures 4.2. iTrack Issue Tracking Screenshots. List view of incidents. Each incident includes a color code and symbol.

ePulse Module & Mobile Application: iTrack Assets

This tool allows the user to create a comprehensive inventory database of their election-related equipment for assigning and tracking. Users can set up item names, serial numbers, and other pertinent data. Users can assign inventory items to individual polling location destinations.

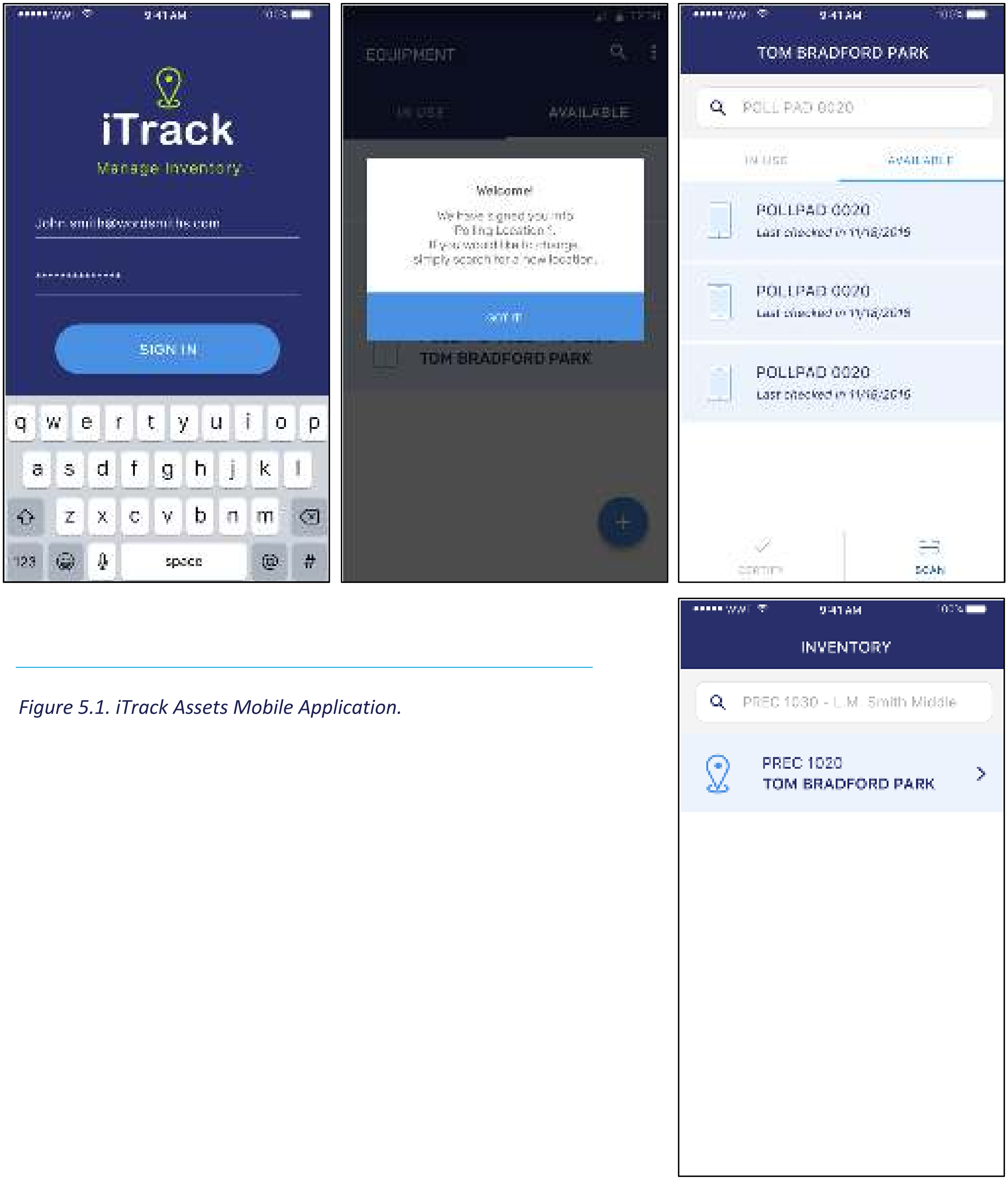
TRACK ALL ELECTION EQUIPMENT WITH ITRACK ASSETS ON MOBILE DEVICES

iTrack Assets is also a mobile application that can be used on any iOS or Android device. Using iTrack, tech support can communicate with poll workers via text messaging and video chat to get a first-hand look at what the poll worker is encountering. It uses data from the client's ePulse database. Users can select a polling place from the ePulse database and scan the barcode to check devices into or out of the polling place inventory. This information is communicated in real time, which allows viewers the ability to check on the status of inventory items at each polling place through ePulse. Election officials can set alerts for missing or low inventory, and log device incidents in the iTrack application and ePulse module for expedited issue tracking and resolution.

With iTrack Assets users can

- Scan any barcode
- Track inventory
- Set alerts
- Print labels
- Log incidents

Screenshots of the iTrack Assets and iTrack Assets Mobile application on the following page.



Welcome!

We have signed you into Polling Location 1.
If you would like to change,
simply search for a new location.

GOT IT

Last checked in 11/16/2016

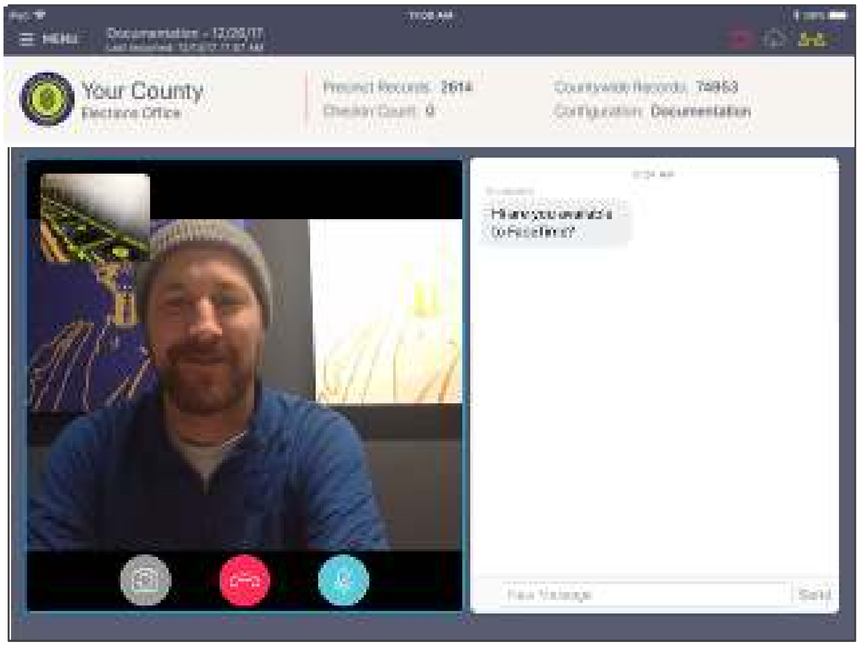
Last checked in 11/16/2016

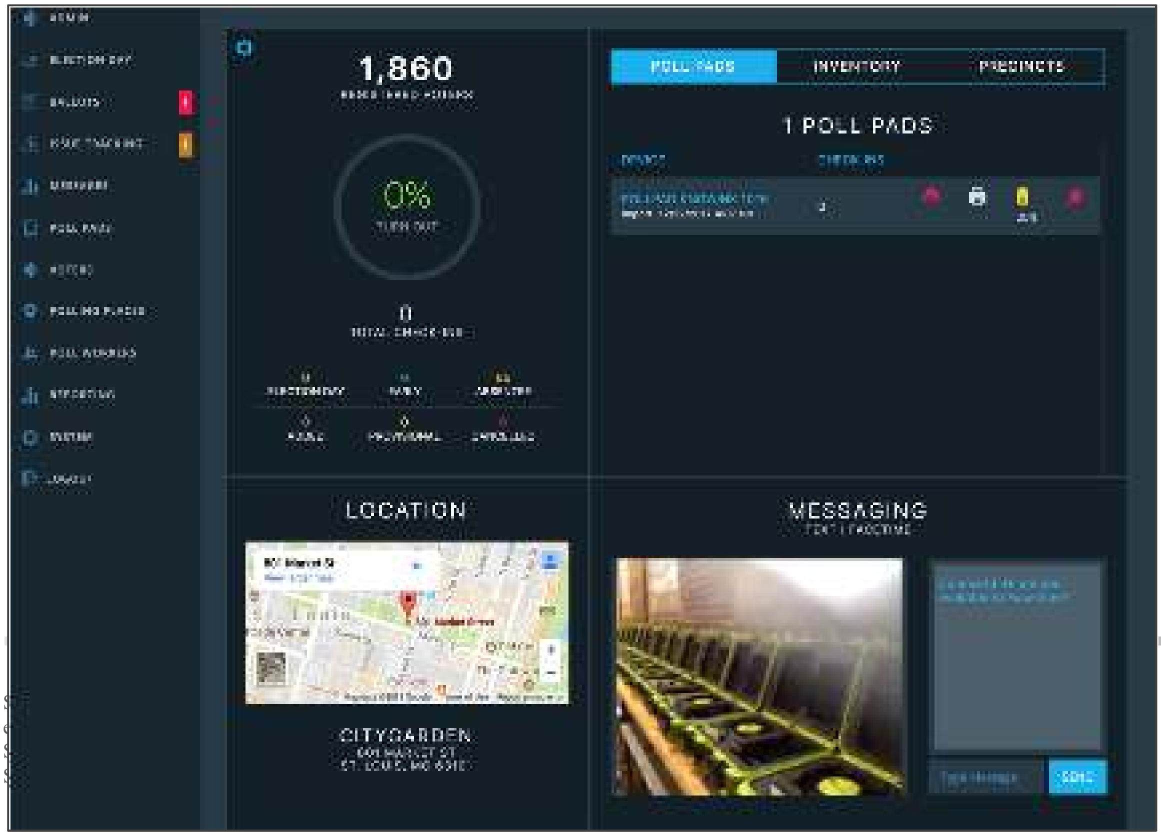
Last checked in 11/16/2016

Figure 5.1. iTrack Assets Mobile Application.

ePulse Module: Video and Text Messaging

ePulse provides election authorities with a powerful and complete communications tool between polling places and the elections office. Customizable and pre-written messages can be sent between the Poll Pads and ePulse to communicate questions and answers. KNOWiNK's innovative video chat is embedded directly into the Poll Pad application and is an election industry first. It revolutionizes how poll workers communicate issues to the election authority by giving them a first-hand look at the polling place.





Figures 6.1 and 6.2. Resolve issues in a polling place with ePulse's Video and Text Messaging capabilities.

ePulse Module: Ballot Tracking

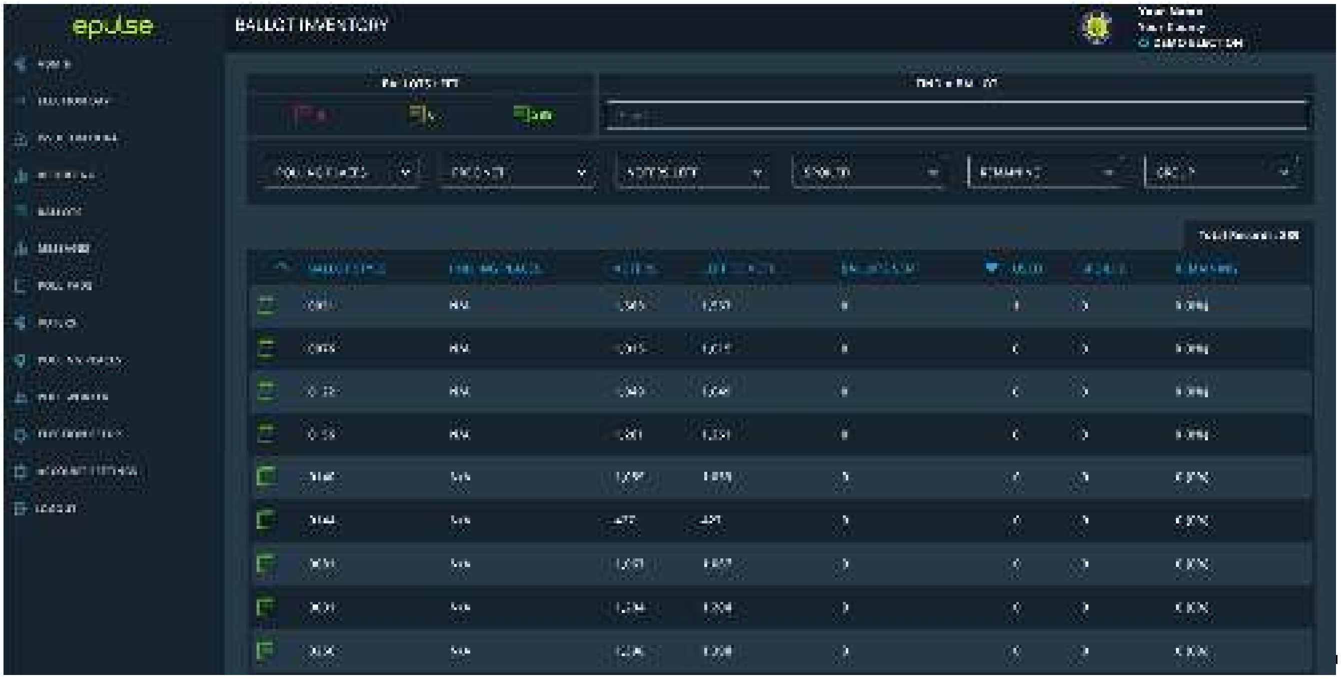
Ballot inventory levels imported into ePulse prior to an election are tracked in real time on the Poll Pad. Poll Pad gives a summary report to reconcile how many ballots were cast and how many were spoiled throughout the day.

ePulse provides customizable reports that summarize the ballot accounting at each location. Ballot inventory levels are tracked by location and the election official may see the numbers update in real time. Filters can be applied to search inventory levels and the user can filter which locations have less than 100 ballots remaining.

Restrictions on the number of ballots issued to a voter can be set to comply with specific election requirements. Poll Pad allows poll workers to account for all ballot activity with running counts throughout the election and poll workers can print summary reports for end-of-day reconciliation. The summary report is customizable and includes information on how many ballots were cast (by party, if necessary), how many were spoiled throughout the day, check-in totals, and any other data type that may need to be tallied.

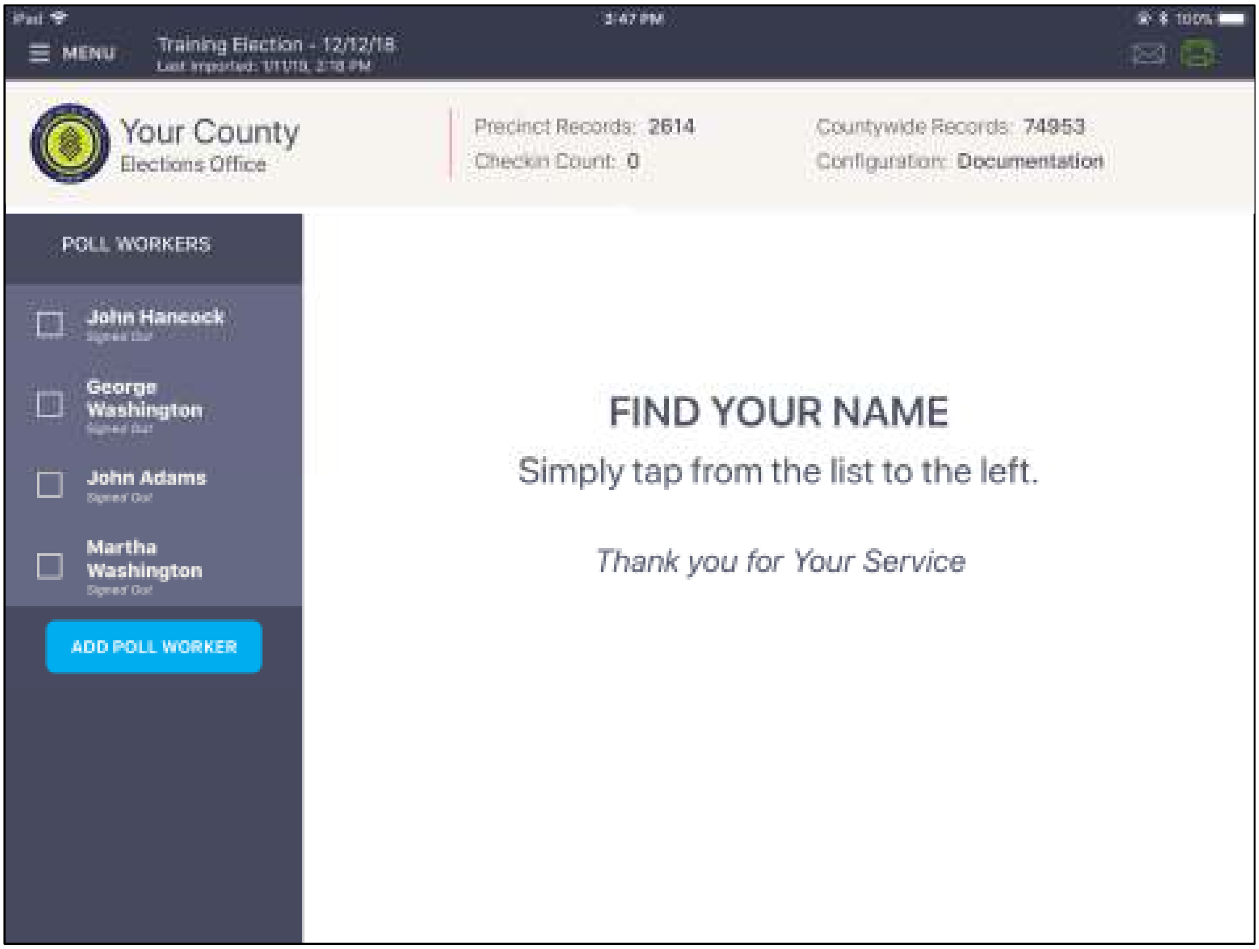
Reports set up in ePulse show the number of ballots available by individual locations. Alerts may be set up in ePulse to alert when ballot inventory levels have gone below a user-definable percentage. These tie in with the Optimal, Acceptable, and Critical alerts elsewhere in ePulse.

Figure 7. Easy-to-use ballot tracking dashboard in ePulse.



ePulse Module: Poll Worker Time Tracking

Poll Pad checks in poll workers, logging the timestamp and signature for each event. ePulse allows election officials to assign roles and pay rates to poll workers and provides reports on payroll, attendance and election day performance. Poll worker attendance is automatically managed on the Poll Pad. Using ePulse, election authorities may export a report of poll worker attendance and time for easy reporting and payment.



Training Election - 12/12/18
Last Imported: 1/11/19, 2:18 PM

Precinct Records: 2614
Checkin Count: 0
Countywide Records: 74953
Configuration: Documentation

☐ **John Hancock** Signed Out
☐ **George Washington** Signed Out
☐ **John Adams** Signed Out
☐ **Martha Washington** Signed Out

FIND YOUR NAME
Simply tap from the list to the left.

Thank you for Your Service

Figure 8. The Poll Worker Time Tracking Tool on the Poll Pad.

ePulse Module: Reporting

Reports can be run in ePulse at any point during and after the election. Our standard reports are listed below. The City can apply filters to customize the standard reports and they may be exported and printed.

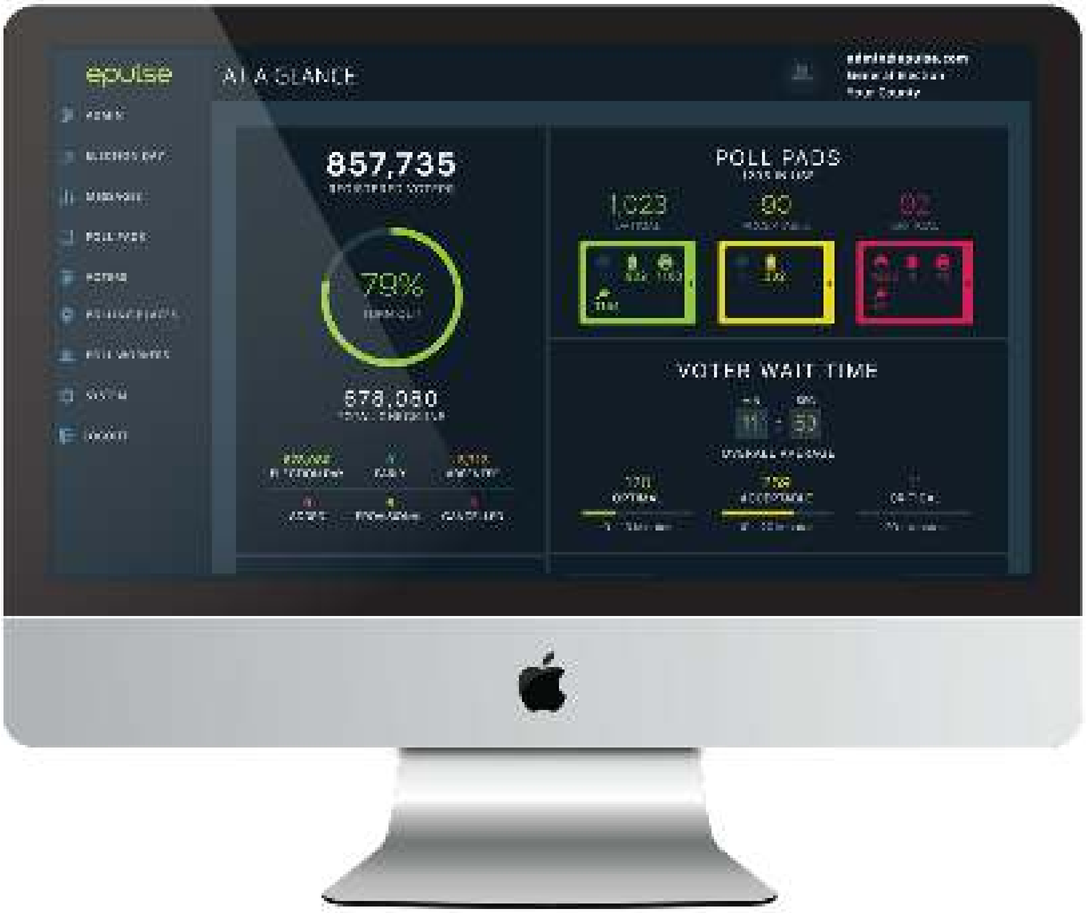
- Voter Check-in Details with Signatures
- Suspense/Inactive Voters who Voted
- Voter Turnout by Precinct
- Poll Worker Sign Ins
- Voter Turnout
- Provisional Voter Report
- Canceled Voter Check Ins
- Voter Rolls by Polling Place
- Ballot Styles
- Voter Turnout by Polling Place

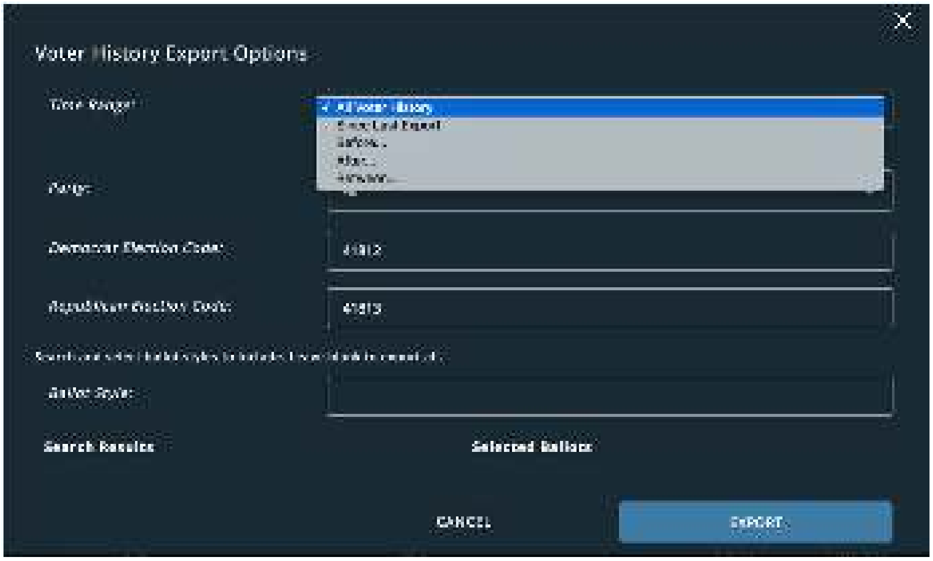
ePulse can sort, filter, and search through check-in data in the post-election discovery process, making it easy to hone in on the exact information that is needed at any time.

The Poll Pad system can report on any data collected by the auditing system, including but not limited to: transaction types; transaction times; transactions by poll official; and number of searches per transaction. Transaction types and transaction times are easily viewable on the Election Day dashboard and updated in real time throughout the day with the use of an internet connection.

Sample ePulse reports are provided on the following pages and include both the web browser screenshots and exported reports.

Figures 9.1 and 9.2. ePulse dashboard and report export options. The ePulse home page dashboard provides real-time metrics on voter turnout, Poll Pad Status, and more. Included in Figure 100 is our simple to use voter history export functions.





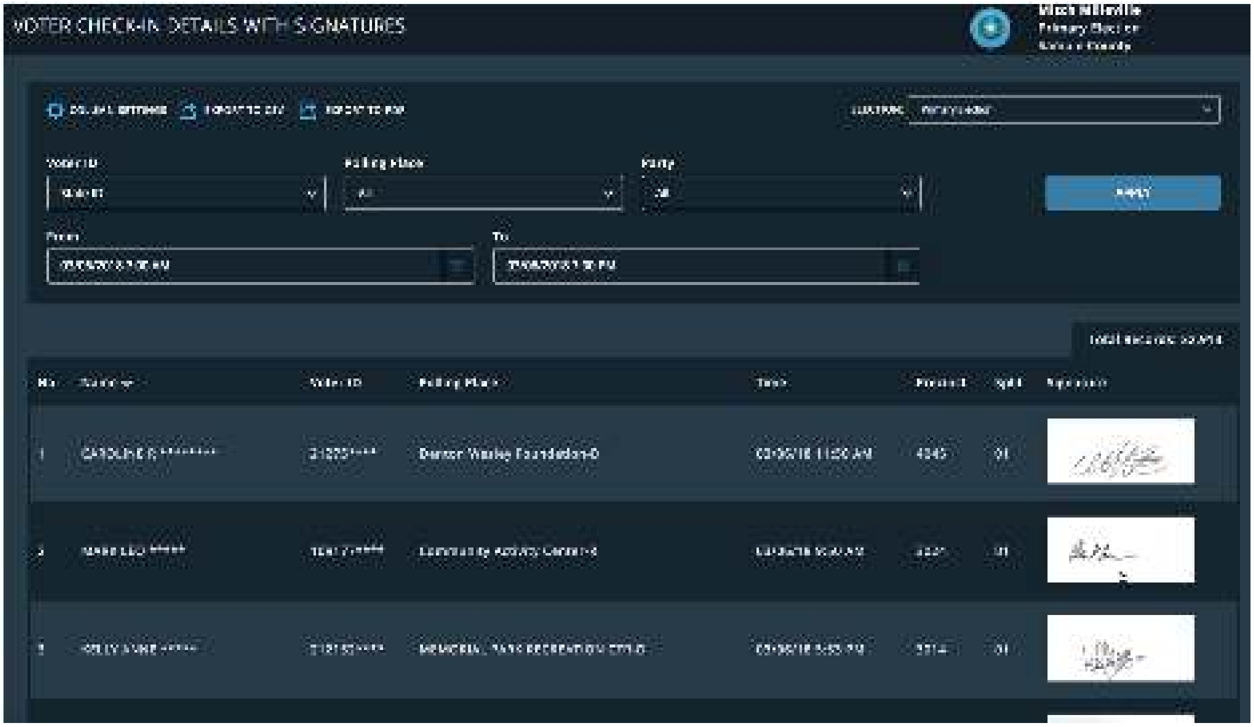
Voter History Export Options

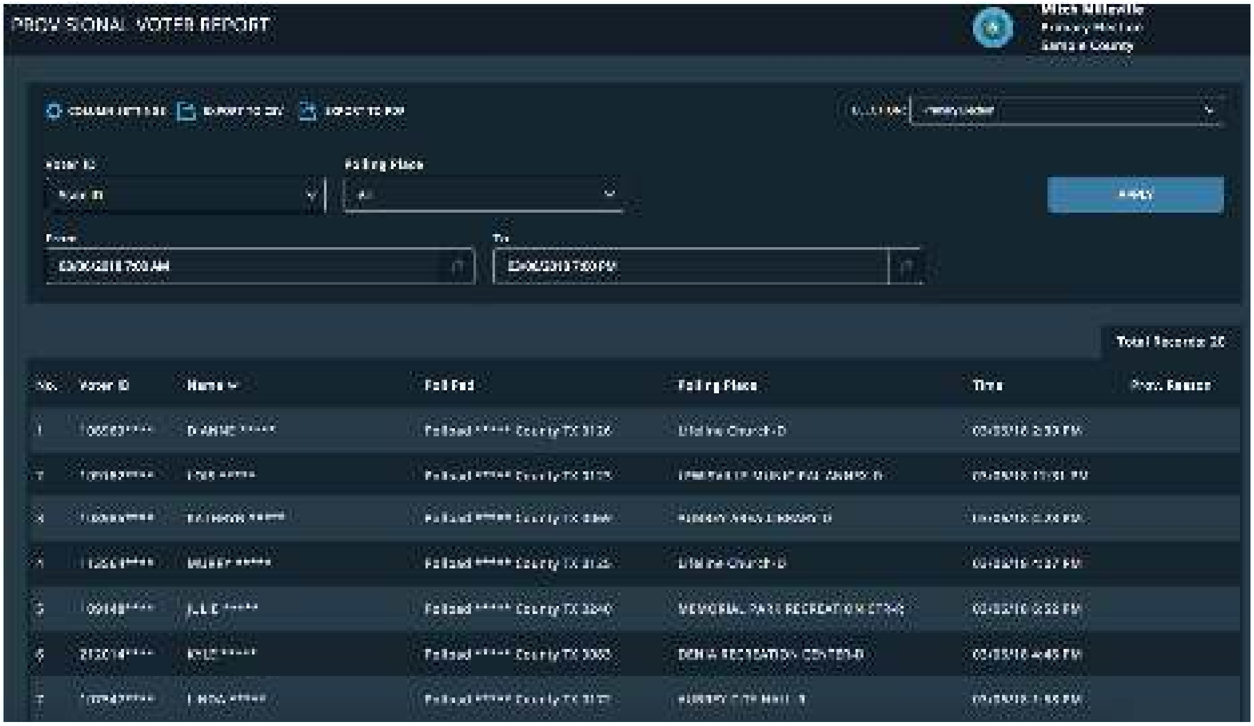
Time Range: All Voter History

Democrat Election Code: 41812

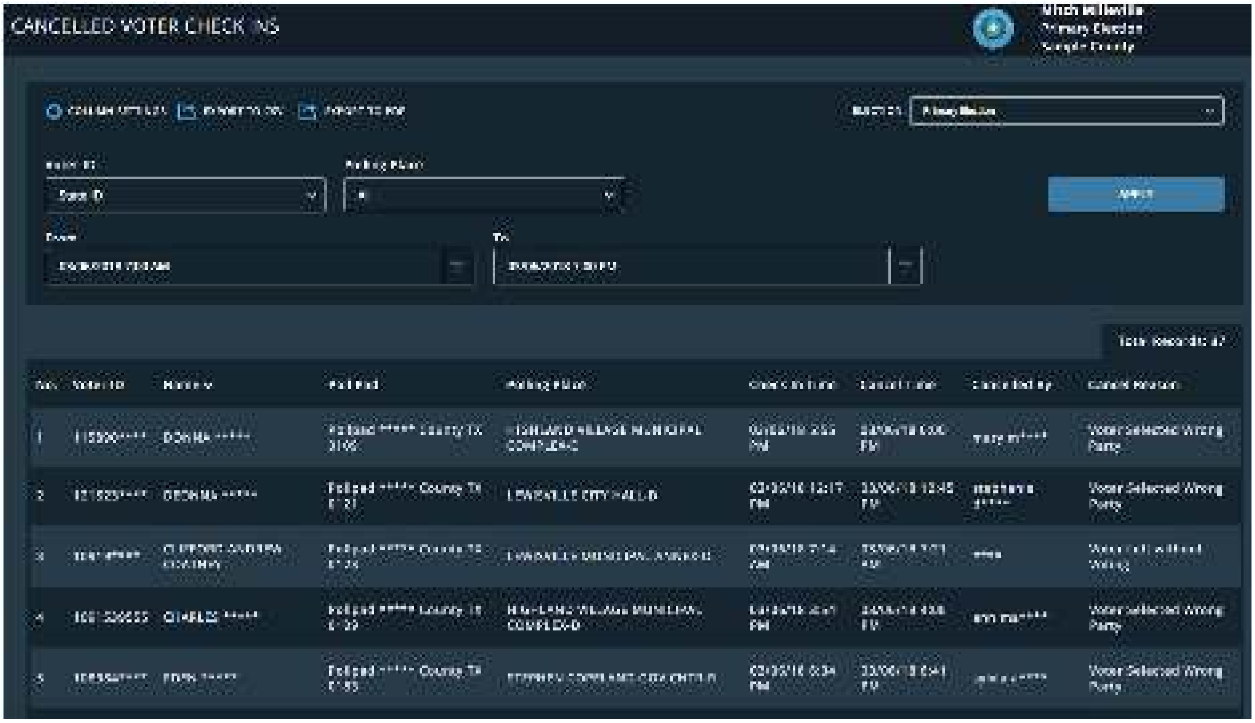
Republican Election Code: 41813

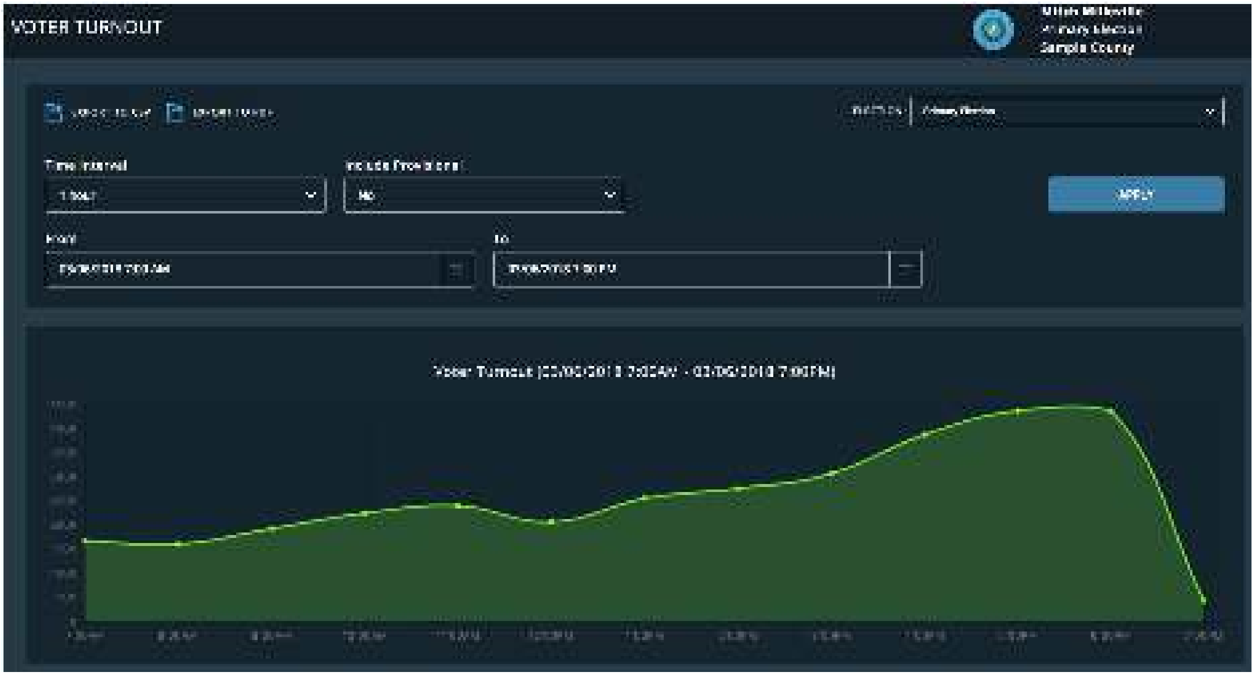
Figures 9.3 and 9.4. ePulse reports: Voter check-in details with signatures and provisional voter report.



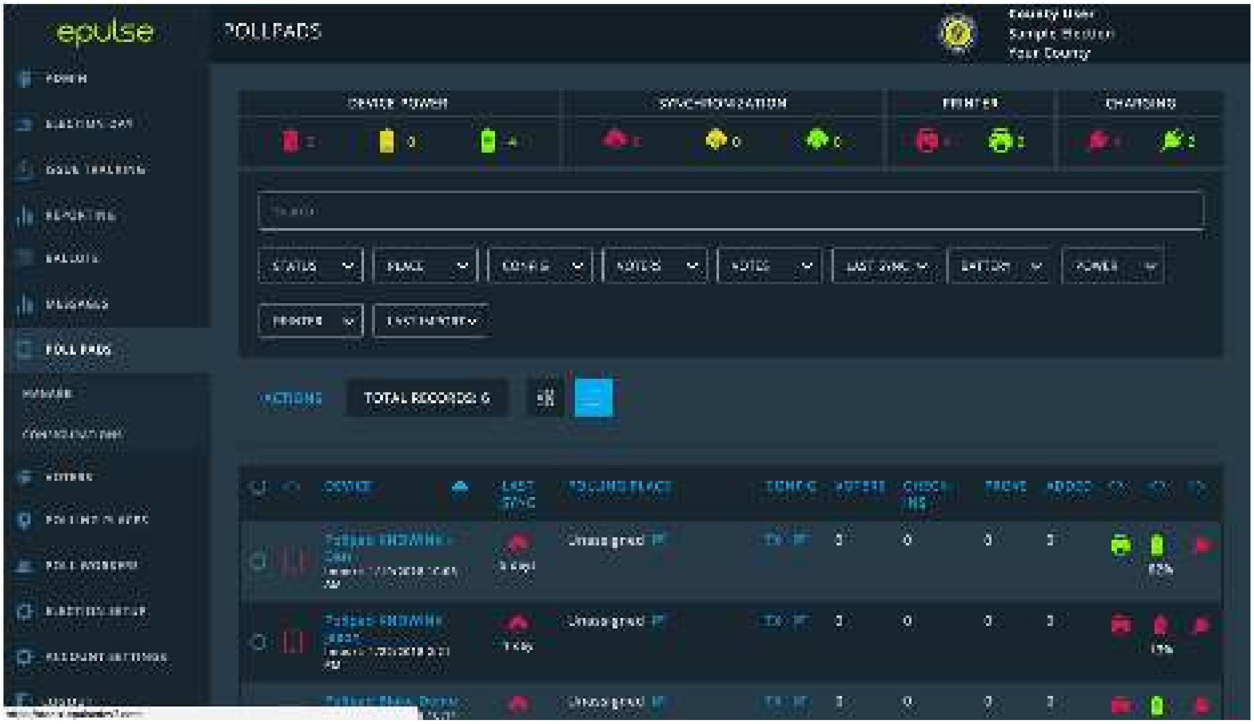


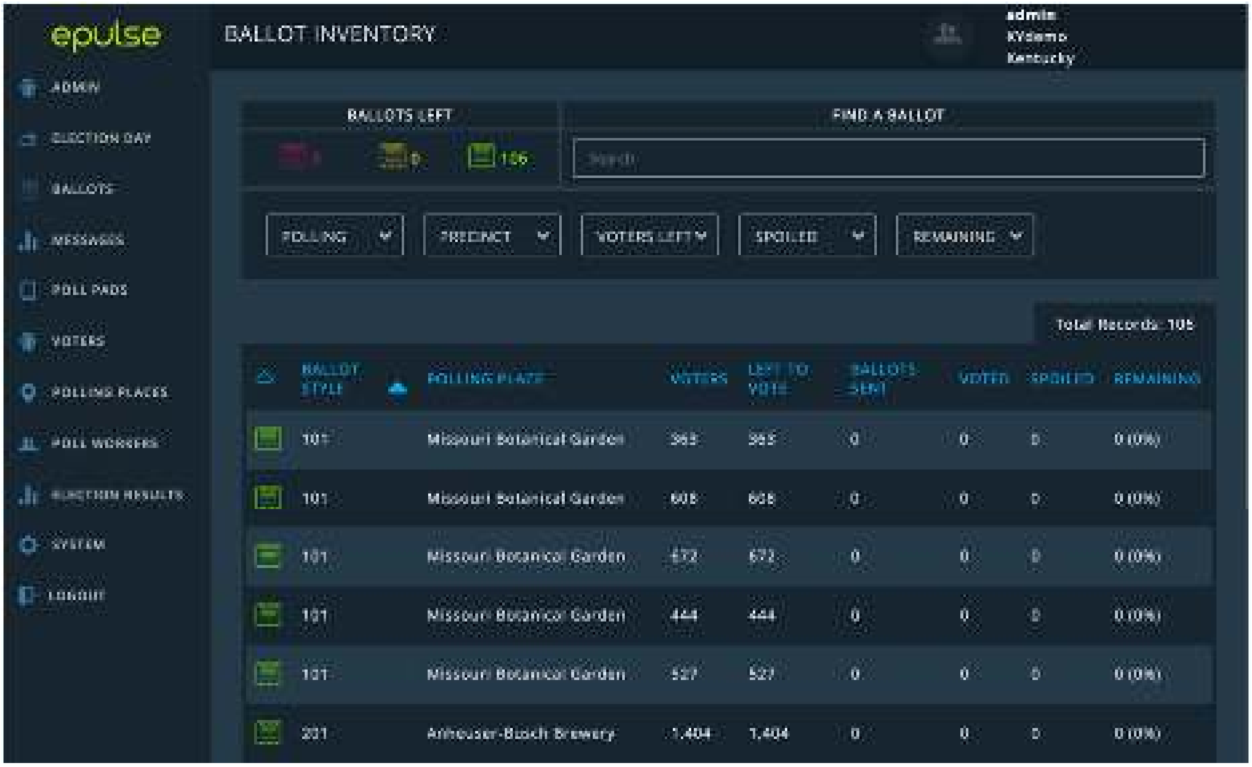
Figures 9.5 and 9.6. ePulse reports: Cancelled voter check-ins and voter turnout.





Figures 9.7 and 9.8. ePulse dashboards: Dashboard views allow the City to monitor the device power status of all Poll Pads. The City can use ePulse to track its ballot inventory by Polling Place.

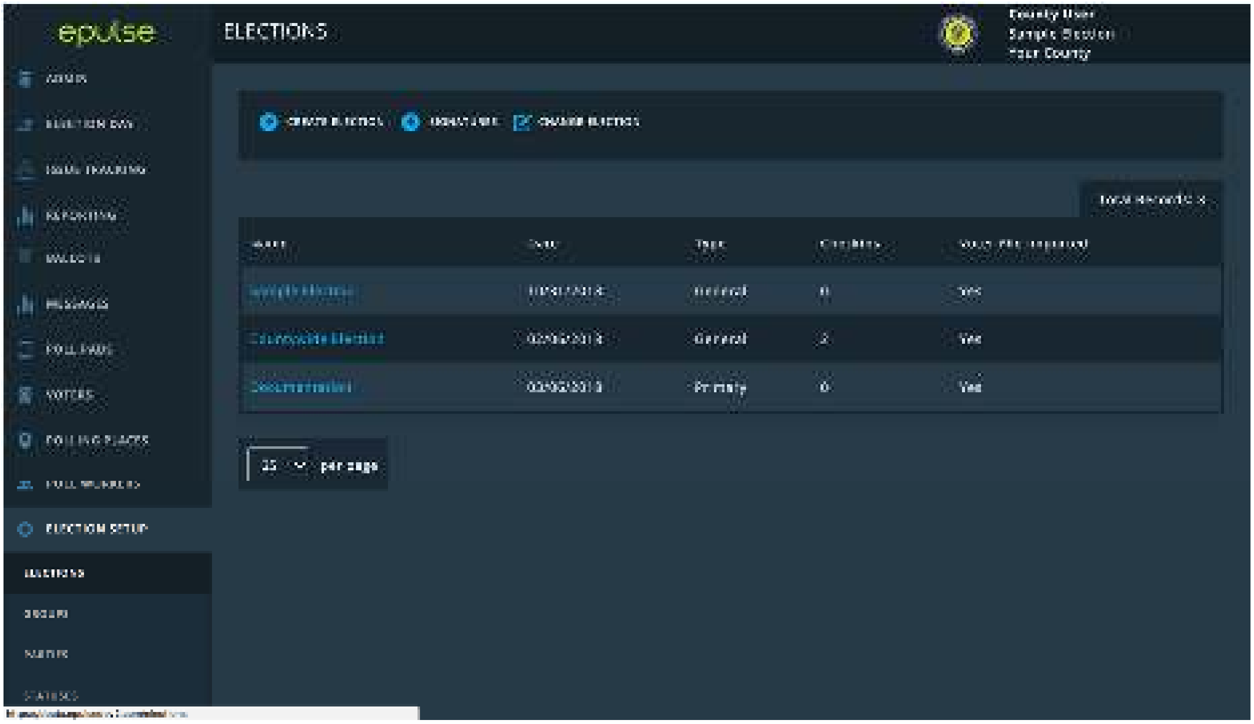




Total Records: 105

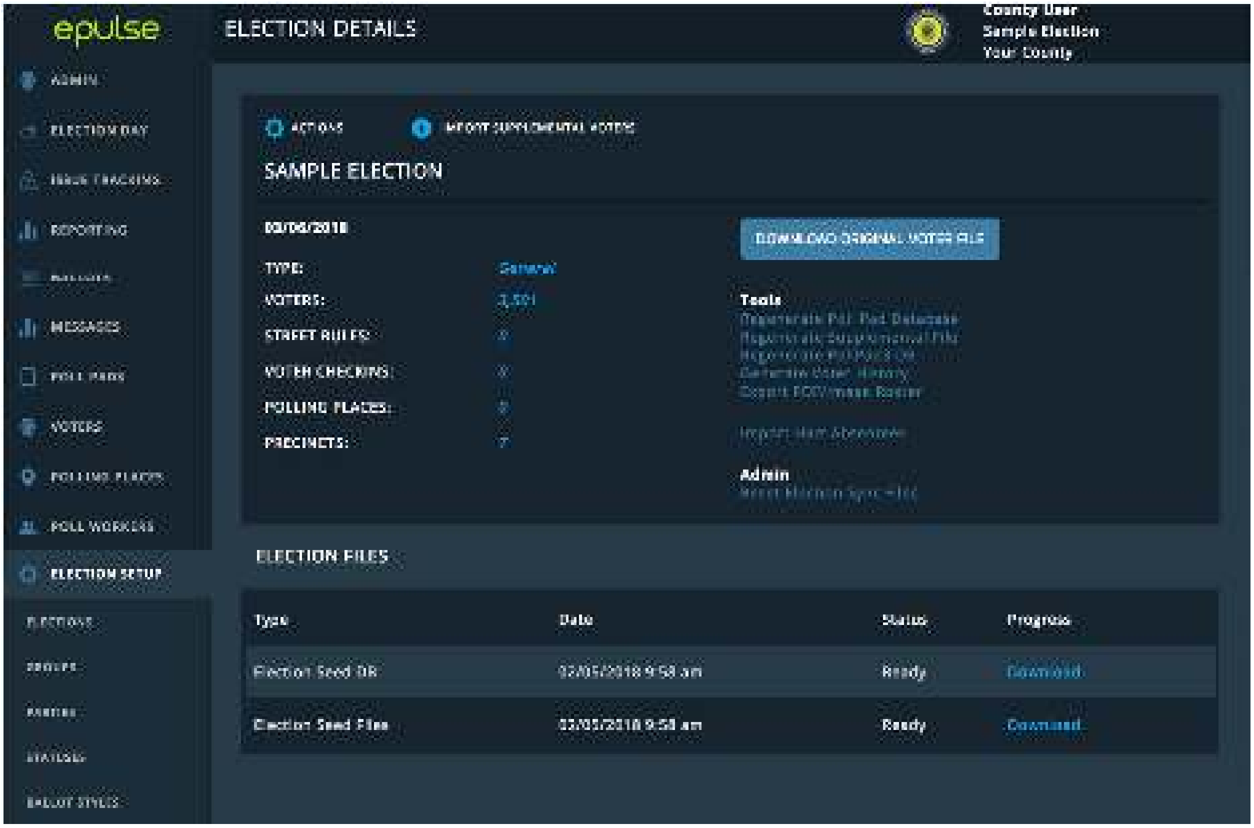
BALLOT STYLE	POLLING PLACE	VOTERS	LEFT TO VOTE	BALLOTS SENT	VOTED	SPOILED	REMAINING
101	Missouri Botanical Garden	365	365	0	0	0	0 (0%)
101	Missouri Botanical Garden	608	608	0	0	0	0 (0%)
101	Missouri Botanical Garden	672	672	0	0	0	0 (0%)
101	Missouri Botanical Garden	444	444	0	0	0	0 (0%)
101	Missouri Botanical Garden	527	527	0	0	0	0 (0%)
201	Anheuser-Busch Brewery	1,404	1,404	0	0	0	0 (0%)

Figures 9.9 and 9.10. Setting up an election in ePulse.



County User
Sample Election
Your County

Name	Date	Type	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	0	Yes
Countywide Election	02/02/2018	General	2	Yes
[illegible]	02/02/2018	Primary	0	Yes



County User
Sample Election
Your County

SAMPLE ELECTION

03/06/2018

TYPE: General
VOTERS: 3,501
STREET RULES: 0
VOTER CHECKINS: 0
POLLING PLACES: 0
PRECINCTS: 7

Tools
Regenerate Poll Pad Database
Regenerate Supplemental File
[illegible]
Generate Voter History
Export [illegible] Roster

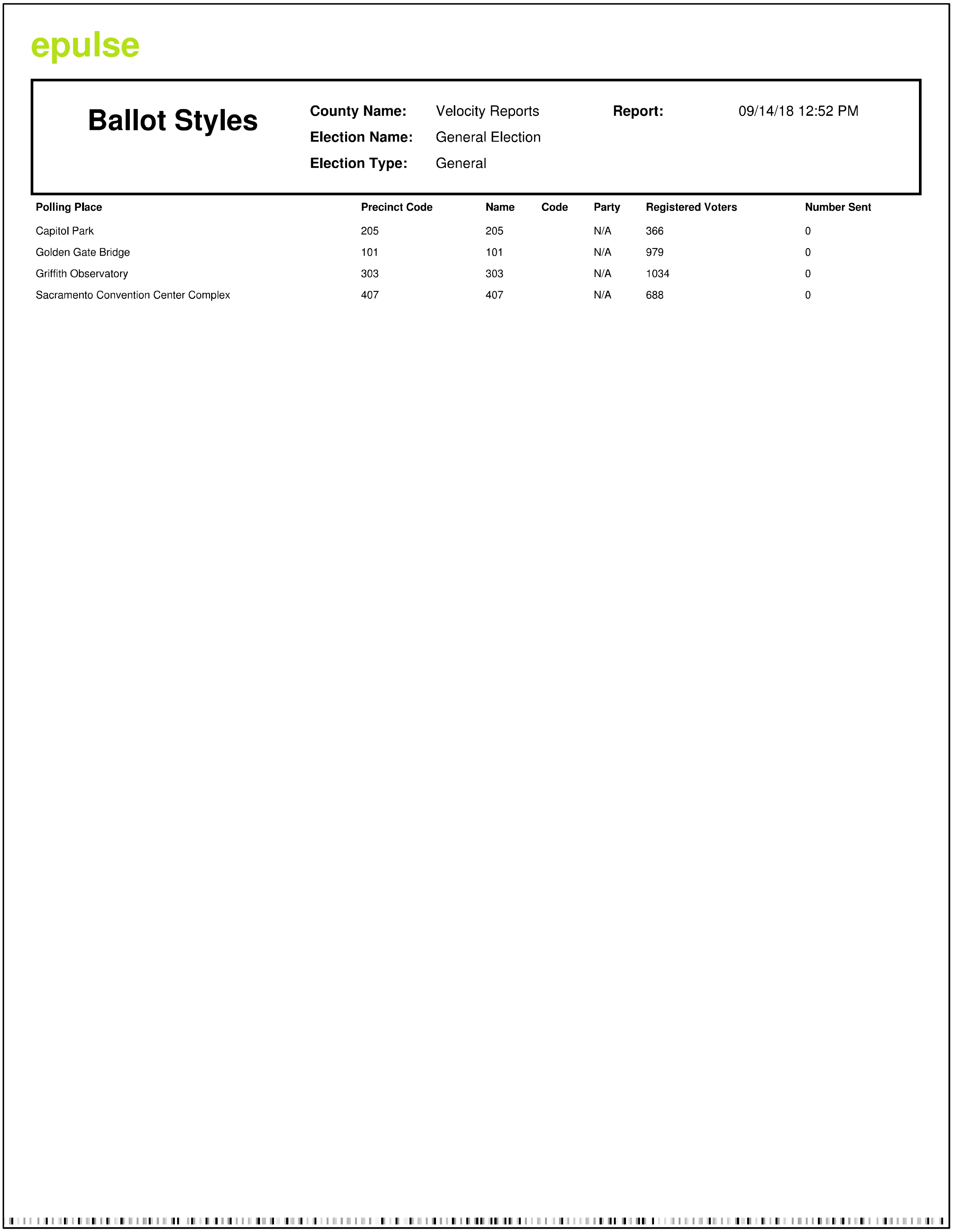
[illegible]

Admin
[illegible]

ELECTION FILES

Type	Date	Status	Progress
Election Seed DB	02/05/2018 9:58 am	Ready	Download
Election Seed Files	02/05/2018 9:58 am	Ready	Download

Figures 9.11. ePulse reports exported to PDF. Ballot styles report.



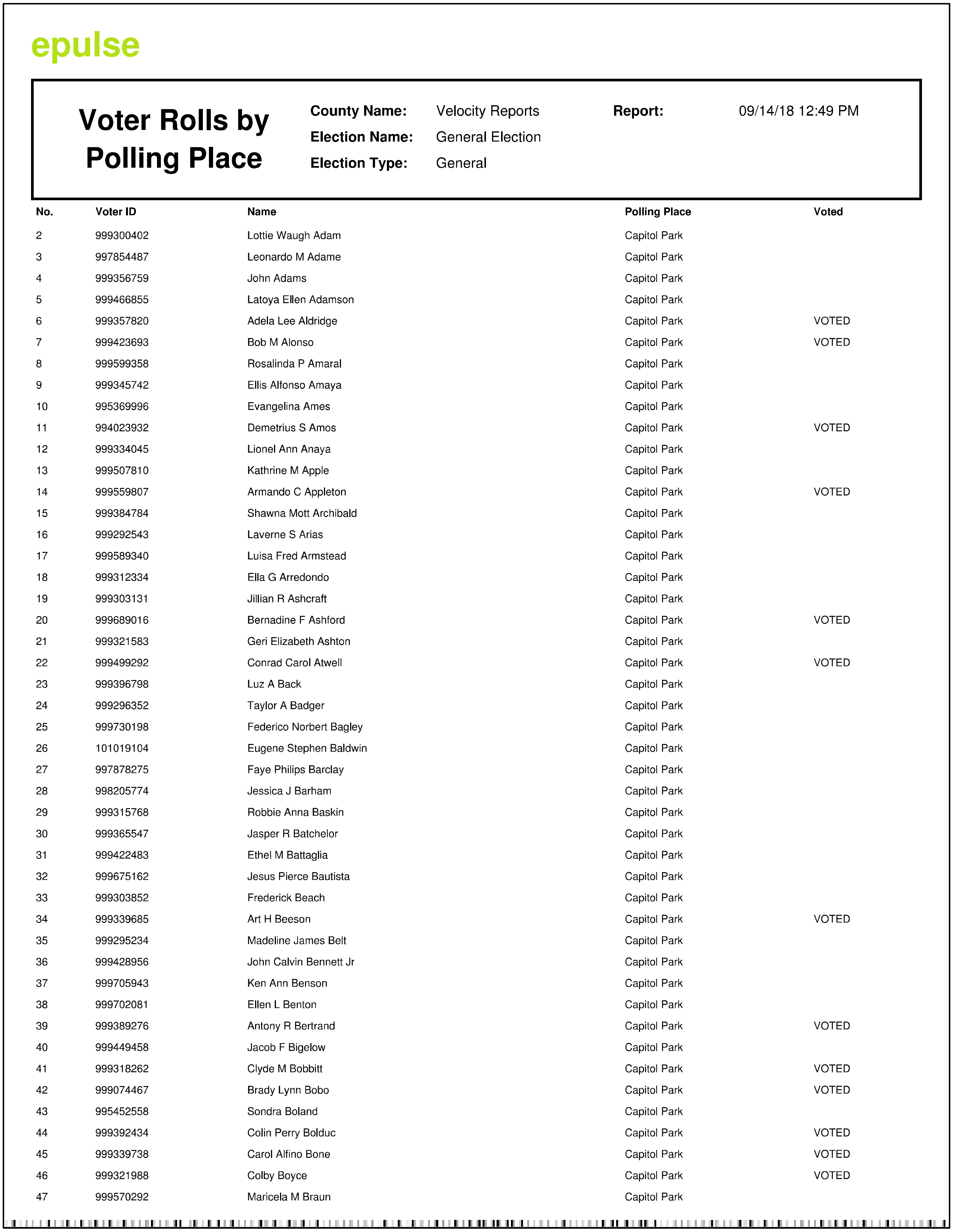
epulse

Ballot Styles

County Name: Velocity Reports
Election Name: General Election
Election Type: General
Report: 09/14/18 12:52 PM

Polling Place	Precinct Code	Name	Code	Party	Registered Voters	Number Sent
Capitol Park	205	205		N/A	366	0
Golden Gate Bridge	101	101		N/A	979	0
Griffith Observatory	303	303		N/A	1034	0
Sacramento Convention Center Complex	407	407		N/A	688	0

Figures 9.12. ePulse reports exported to PDF. Voter rosters/rolls by polling place.



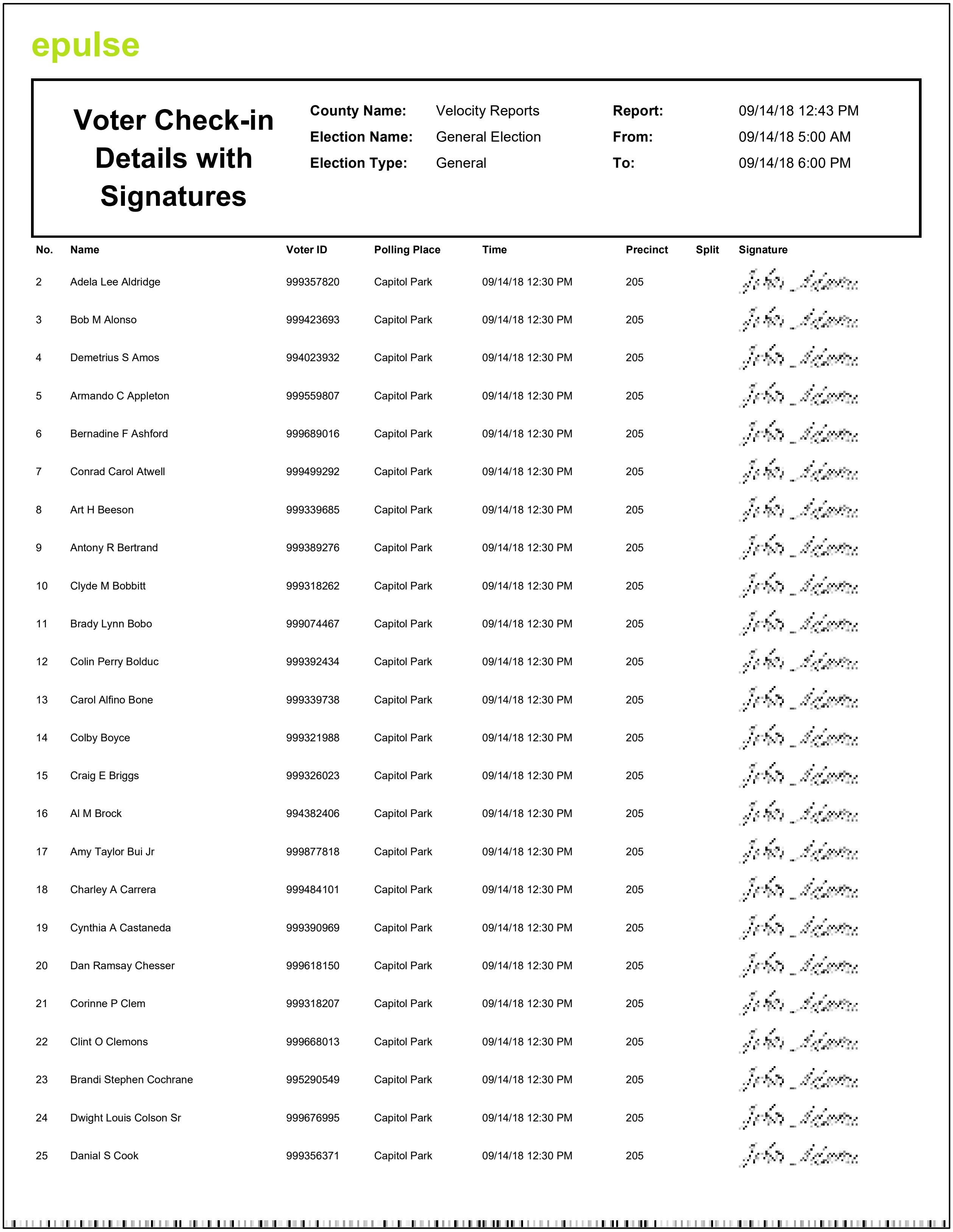
epulse

Voter Rolls by Polling Place

County Name: Velocity Reports
Election Name: General Election
Election Type: General
Report: 09/14/18 12:49 PM

No.	Voter ID	Name	Polling Place	Voted
2	999300402	Lottie Waugh Adam	Capitol Park	
3	997854487	Leonardo M Adame	Capitol Park	
4	999356759	John Adams	Capitol Park	
5	999466855	Latoya Ellen Adamson	Capitol Park	
6	999357820	Adela Lee Aldridge	Capitol Park	VOTED
7	999423693	Bob M Alonso	Capitol Park	VOTED
8	999599358	Rosalinda P Amaral	Capitol Park	
9	999345742	Ellis Alfonso Amaya	Capitol Park	
10	995369996	Evangelina Ames	Capitol Park	
11	994023932	Demetrius S Amos	Capitol Park	VOTED
12	999334045	Lionel Ann Anaya	Capitol Park	
13	999507810	Kathrine M Apple	Capitol Park	
14	999559807	Armando C Appleton	Capitol Park	VOTED
15	999384784	Shawna Mott Archibald	Capitol Park	
16	999292543	Laverne S Arias	Capitol Park	
17	999589340	Luisa Fred Armstead	Capitol Park	
18	999312334	Ella G Arredondo	Capitol Park	
19	999303131	Jillian R Ashcraft	Capitol Park	
20	999689016	Bernadine F Ashford	Capitol Park	VOTED
21	999321583	Geri Elizabeth Ashton	Capitol Park	
22	999499292	Conrad Carol Atwell	Capitol Park	VOTED
23	999396798	Luz A Back	Capitol Park	
24	999296352	Taylor A Badger	Capitol Park	
25	999730198	Federico Norbert Bagley	Capitol Park	
26	101019104	Eugene Stephen Baldwin	Capitol Park	
27	997878275	Faye Philips Barclay	Capitol Park	
28	998205774	Jessica J Barham	Capitol Park	
29	999315768	Robbie Anna Baskin	Capitol Park	
30	999365547	Jasper R Batchelor	Capitol Park	
31	999422483	Ethel M Battaglia	Capitol Park	
32	999675162	Jesus Pierce Bautista	Capitol Park	
33	999303852	Frederick Beach	Capitol Park	
34	999339685	Art H Beeson	Capitol Park	VOTED
35	999295234	Madeline James Belt	Capitol Park	
36	999428956	John Calvin Bennett Jr	Capitol Park	
37	999705943	Ken Ann Benson	Capitol Park	
38	999702081	Ellen L Benton	Capitol Park	
39	999389276	Antony R Bertrand	Capitol Park	VOTED
40	999449458	Jacob F Bigelow	Capitol Park	
41	999318262	Clyde M Bobbitt	Capitol Park	VOTED
42	999074467	Brady Lynn Bobo	Capitol Park	VOTED
43	995452558	Sondra Boland	Capitol Park	
44	999392434	Colin Perry Bolduc	Capitol Park	VOTED
45	999339738	Carol Alfino Bone	Capitol Park	VOTED
46	999321988	Colby Boyce	Capitol Park	VOTED
47	999570292	Maricela M Braun	Capitol Park	

Figures 9.12. ePulse reports exported to PDF. Voter check-in details with signatures.



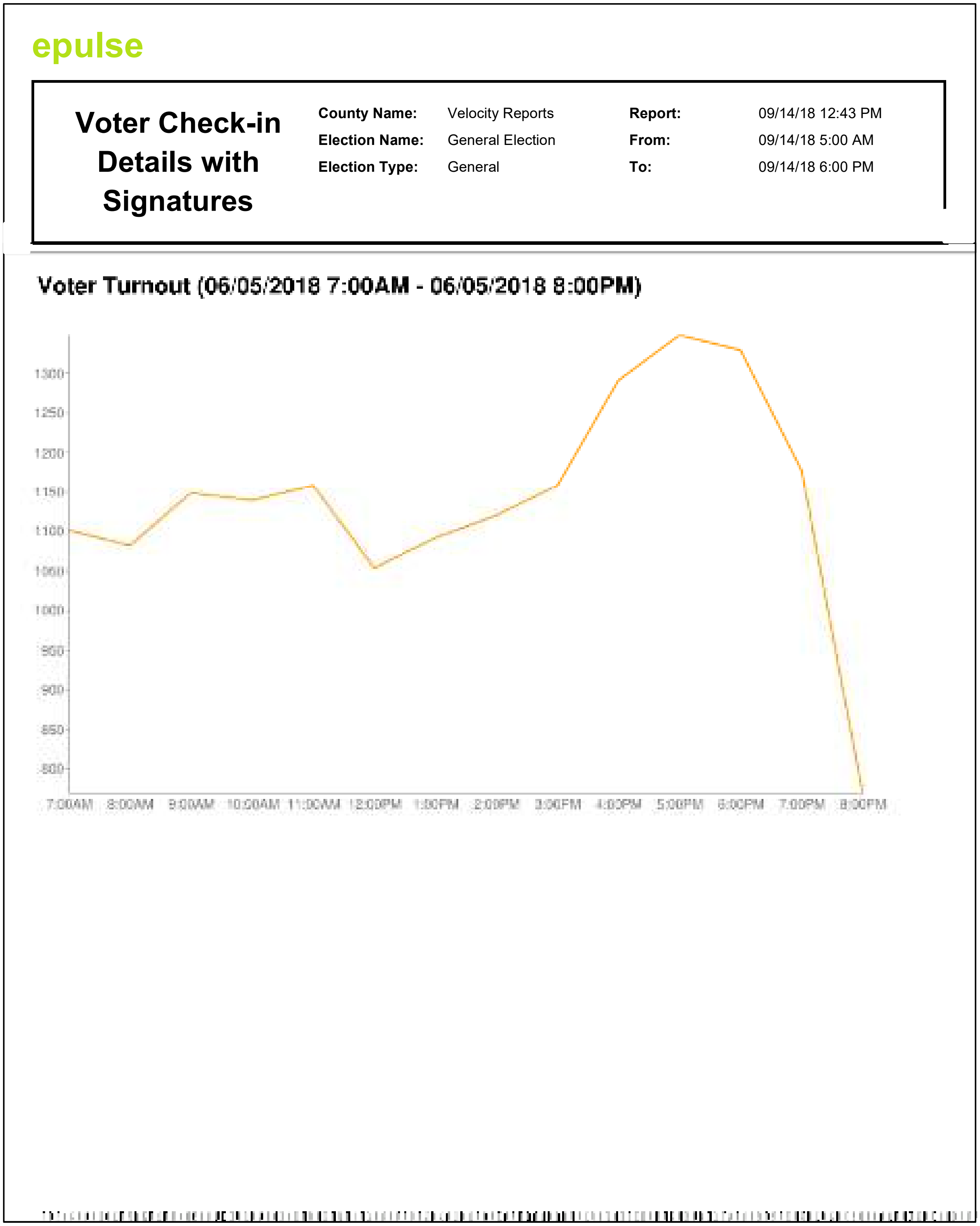
epulse

Voter Check-in Details with Signatures

County Name:	Velocity Reports	**Report:**	09/14/18 12:43 PM
Election Name:	General Election	**From:**	09/14/18 5:00 AM
Election Type:	General	**To:**	09/14/18 6:00 PM

No.	Name	Voter ID	Polling Place	Time	Precinct	Split	Signature
2	Adela Lee Aldridge	999357820	Capitol Park	09/14/18 12:30 PM	205		
3	Bob M Alonso	999423693	Capitol Park	09/14/18 12:30 PM	205		
4	Demetrius S Amos	994023932	Capitol Park	09/14/18 12:30 PM	205		
5	Armando C Appleton	999559807	Capitol Park	09/14/18 12:30 PM	205		
6	Bernadine F Ashford	999689016	Capitol Park	09/14/18 12:30 PM	205		
7	Conrad Carol Atwell	999499292	Capitol Park	09/14/18 12:30 PM	205		
8	Art H Beeson	999339685	Capitol Park	09/14/18 12:30 PM	205		
9	Antony R Bertrand	999389276	Capitol Park	09/14/18 12:30 PM	205		
10	Clyde M Bobbitt	999318262	Capitol Park	09/14/18 12:30 PM	205		
11	Brady Lynn Bobo	999074467	Capitol Park	09/14/18 12:30 PM	205		
12	Colin Perry Bolduc	999392434	Capitol Park	09/14/18 12:30 PM	205		
13	Carol Alfino Bone	999339738	Capitol Park	09/14/18 12:30 PM	205		
14	Colby Boyce	999321988	Capitol Park	09/14/18 12:30 PM	205		
15	Craig E Briggs	999326023	Capitol Park	09/14/18 12:30 PM	205		
16	Al M Brock	994382406	Capitol Park	09/14/18 12:30 PM	205		
17	Amy Taylor Bui Jr	999877818	Capitol Park	09/14/18 12:30 PM	205		
18	Charley A Carrera	999484101	Capitol Park	09/14/18 12:30 PM	205		
19	Cynthia A Castaneda	999390969	Capitol Park	09/14/18 12:30 PM	205		
20	Dan Ramsay Chesser	999618150	Capitol Park	09/14/18 12:30 PM	205		
21	Corinne P Clem	999318207	Capitol Park	09/14/18 12:30 PM	205		
22	Clint O Clemons	999668013	Capitol Park	09/14/18 12:30 PM	205		
23	Brandi Stephen Cochrane	995290549	Capitol Park	09/14/18 12:30 PM	205		
24	Dwight Louis Colson Sr	999676995	Capitol Park	09/14/18 12:30 PM	205		
25	Danial S Cook	999356371	Capitol Park	09/14/18 12:30 PM	205		

Figures 9.12. ePulse reports exported to PDF. Voter check-in details with signatures.



epulse

Voter Check-in Details with Signatures

County Name:	Velocity Reports	**Report:**	09/14/18 12:43 PM
Election Name:	General Election	**From:**	09/14/18 5:00 AM
Election Type:	General	**To:**	09/14/18 6:00 PM

Voter Turnout (06/05/2018 7:00AM - 06/05/2018 8:00PM)

KNOWiNK's Experience

State of Rhode Island

The State of Rhode Island partnered with KNOWiNK and ran successful concurrent elections involving 781,752 registered voters at 502 polling places. Rhode Island has 56 ePulse users. Of the 56 users, there are 47 groups types which limits their view to only their specific jurisdiction. ePulse is set up for Rhode Island with five different default roles to use as templates, and then the State can limit or add permissions depending on needs. They use ePulse messaging to contact different polling places on the Poll Pad.

The initial order included 200 Poll Pads with the ePulse management system, which provides a real-time dashboard to monitor overall election activity. The State then ordered an additional 1,500 units in 2017. The budget and the target dates were both met, and the 49 elections they have run on the Poll Pad have all been successful.

The project scope includes:

- Election day voter check-in
- Peer-to-peer EPB synchronization
- Server sync to ePulse, giving real time dashboard updates and statistics
- Semi-closed Primary elections, customized party voting rules via ePulse
- Concurrent multiple users and elections in ePulse

2016

FIRST ELECTION

781,752

REGISTERED

1,600

POLL PADS

"Poll workers and voters especially appreciated how easy the Poll Pads are to use...it's really a wow factor [!]."

Nellie Gorbea

Rhode Island Secretary of State

"Nice Job KNOWiNK team. I'm on a call with the advisory board of the center of technology and civic life. Just sang the praises of KNOWiNK and numerous others on the call chimed in with nothing but terrific remarks! Great work!"

Rob Rock

Hennepin County, Minnesota

Hennepin County, the largest county in Minnesota, selected the Poll Pad solution and began integrating them into their elections in 2016, with Minneapolis deploying the Poll Pad in 2017. Hennepin uses ePulse module iTrack Issue Tracking for Election Day issue reporting, technician assignments, and resolution reporting. In phase one, KNOWiNK configured and deployed 1,100 Poll Pads to 423 polling locations for the 2016 state primary and general elections. In phase two, 765 additional Poll Pad units were deployed beginning in May 2017.

Since 2016, Minnesota's board of elections has approved the Poll Pad for statewide deployment to be determined by individual counties and 53 counties have selected the Poll Pad totaling more than 5,000 devices. We successfully implemented the Poll Pad solution in these counties for their August 2018 Primary Election.

2016

FIRST ELECTION

780,000

REGISTERED VOTERS

1,865

POLL PADS

The project scope includes:

- Develop data migration protocols between the County's existing voter registration system and KNOWiNK's ePulse/Central Command election management system.
- Customize the Poll Pad Election Day Registration module to meet the specific needs of the Count.
- Design and install dedicated network infrastructure to manage 1,865 electronic poll books in 47 separate municipalities.
- Provide training consulting services to assist County in developing their comprehensive poll worker training program.
- Provide on-site support personnel for the County's first Election Day deployment

Outcomes Achieved

Hennepin County successfully deployed the KNOWiNK Poll Pad in 2016 in the Primary and General elections across the County's suburban municipalities. Outcomes include faster election day registration; improved data for post-election processing; cost savings in post-election processing; better metrics on voter turnout; fewer provisional ballots; and decreased unnecessary Election Day registrations.

> ***“It’s an important step for us to modernize the election process... It’ll bring that process into the 21st century.”***
>
> Ginny Gelms, Elections Manager | Hennepin County, MN

Washington, D.C.

KNOWiNK provided an EPB solution with ePulse EPDMS for use during early voting in satellite Vote Center locations and during Election Day in precinct-specific polling places. D.C. uses ePulse messaging to Poll Pads, serving synchronizing during early voting and on Election Day, and in December of 2018 they piloted iTrack Issue Tracking.

The project scope includes:

- Provided training support, consulting, and setup Early Voting Centers two weeks prior to Election Day with daily data migration.
- Develop a processing work flow for Same Day Registration (SDR) during early voting in Vote Centers and on Election Day in precinct-specific polling places.
- Goals of the SDR included: Easy data entry for Election Officers; uniformity of data where possible (e.g., address street names); and determination of proper ballot.
- Develop data migration tools between DCBOE’s voter registration system and KNOWiNK’s Management Control Dashboard, ePulse.
- Provide training support services to DCBOE staff for poll worker and staff training.
- Provide on-site election support for Election Day and pre-election preparation.

Outcomes Achieved

Washington, D.C. successfully deployed the KNOWiNK Poll Pad in 2016 in the Primary and General elections. Use of the Poll Pad Solution improved Washington, D.C.’s Early Voting process; reduced lines on Election Day; and reduced the number of provisional voters.

2016

FIRST ELECTION

617,164

REGISTERED VOTERS

900

POLL PADS

> ***“Poll Pad was a big improvement over the legacy system it replaced in 2016, both in the Primary and General Elections. The District aggressively rolled out new voting equipment and poll book system concurrently in June. Poll Pad’s intuitive setup and operation, safeguards against error, top tier customer support, and user-friendliness for the poll workers were all big contributors to the successful 2016 rollout.”***
>
> District of Columbia Board of Elections

For confidence in ePulse security, we have attached an overview of KNOWiNK’s security solution.

Security
Solution

knowINK
Innovative Election Solutions

Table of Contents

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Section 7 – Electronic Poll Book (EPoll)

File 7-1 EPoll

7.1 Complete the attached form titled "Electronic Poll Book" and include narrative.

KNOWiNK has completed Attachment N Electronic Poll Book and included a narrative.

Vendor: KNOWINK LLC

Attachment N - Electronic Poll Book

Electronic Poll Book (EPoll) Describe all answers regarding your EPoll solution. The proposed EPoll solution shall:	CONFIRM THAT CAPABILITY EXISTS AND IS ABLE TO BE DEMONSTRATED	KEY FUNCTIONALITY AND SYSTEM CAPABILITY	PROPOSED PRODUCT(S) AND METHOD OF CONTRACTING (license, sale, lease, subscription, etc.?) (DO NOT INCLUDE COST)
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Vendor: KNOWINK LLC

Attachment N - Electronic Poll Book

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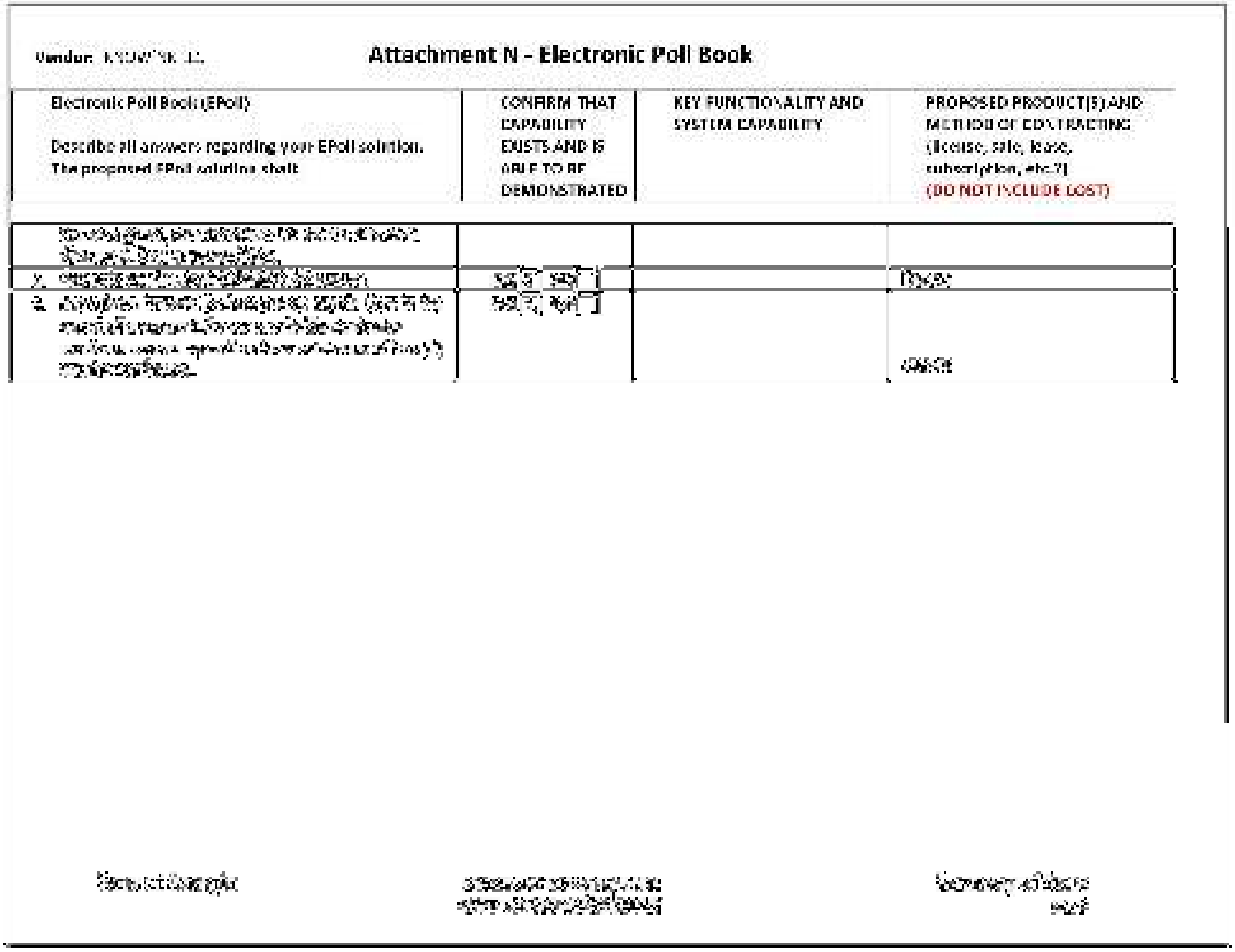

Vendor: KNOWINK LLC

Attachment N - Electronic Poll Book

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1. [illegible]	Yes ☒ No ☐		[illegible]
2. [illegible]	Yes ☒ No ☐		[illegible]

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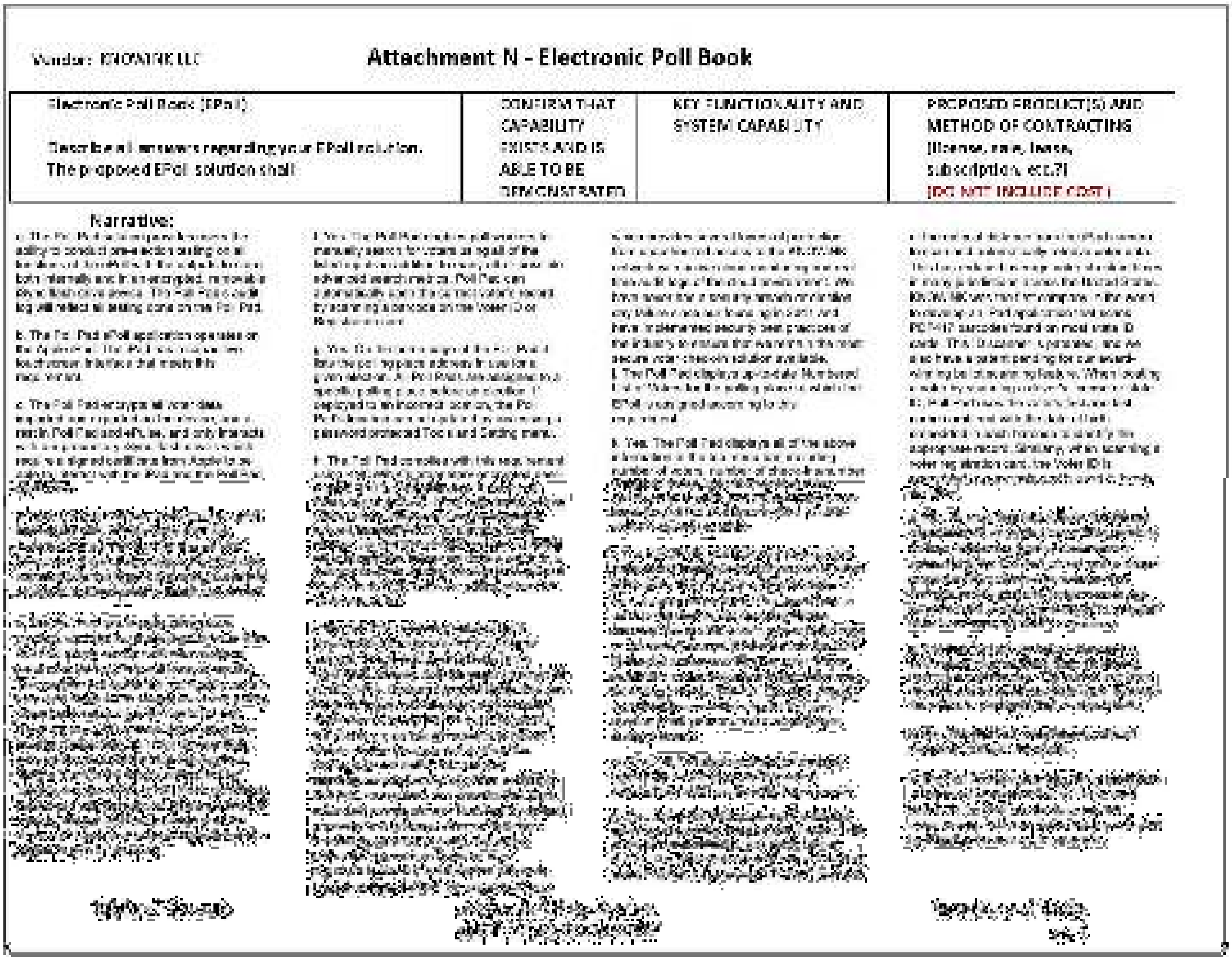

Vendor: KNOWINK LLC

Attachment N - Electronic Poll Book

Electronic Poll Book (EPoll) Describe all answers regarding your EPoll solution. The proposed EPoll solution shall	CONFIRM THAT CAPABILITY EXISTS AND IS ABLE TO BE DEMONSTRATED	KEY FUNCTIONALITY AND SYSTEM CAPABILITY	PROPOSED PRODUCT(S) AND METHOD OF CONTRACTING (license, sale, lease, subscription, etc.?) (DO NOT INCLUDE COST)

Narrative:

Section 7 – Electronic Poll Book (EPoll)

File 7-2 EPoll Media

7.2 Describe how election configuration information is loaded. Is it done via encrypted, removable memory devices created by the EPDMS or through direct a connection to EPDMS through a LAN?

The State has the option to load election configuration information from the ePulse EPDMS to the EPoll devices using network connectivity or LAN connection in the central GASOS office, or with KNOWiNK's secure proprietary removable memory device, the iSync flash drives. All data in transit and at rest is encrypted using multiple certified and proven security methods. All of the above methods provide a secure method for transferring encrypted election configuration data.

Once connected, the voter files are loaded onto the Poll Pad with the correct precinct information and State voter data, typically within ten minutes or less depending on the size of the file. For seven million voters, the data may take ten to 15 minutes to load.

If the State decides to allow network connectivity in the future, administrators can load the voter data and election configuration information to the Poll Pads remotely using encrypted traffic and a virtual private network hosted by Amazon Web Services GovCloud.

Apple inherently blocks removable memory from being connected to an iPad. KNOWiNK has developed a secure device, known as iSync, that allows for data transfer to and from the Poll Pad application. In order to connect to our application, the device has been certified by Apple and issued a certificate by Apple that allows it to communicate with the Poll Pad application. All data included on the iSync drive is fully encrypted using 256 bit AES encryption and is validated by a certificate stored on the keychain of the iOS device. While iSync is available and can make the Poll Pad easier to use, especially when a quick and reliable network connection is not available, it is not required for use.

Section 7 – Electronic Poll Book (EPoll)

File 7-3 EPoll Validation

7.3 Describe any software/firmware validation tools built into the device for use in installation, pre-election, and post-election testing to verify that software/firmware has not been modified.

The Poll Pad has built-in software and firmware validation tools that enable the device to verify that it has not been modified and demonstrate this via comprehensive audit logs that timestamp and display every single event or interaction on the device. The application is code signed using our Apple enterprise development license and will not run on any device if it has been modified in any way. For more info, please see the "App code signing" section in the Apple iOS 12 Security paper attached to section 7-4.

Firmware tools inherent to the iPad include “sandboxed” applications which prevent applications from interacting with one another or accessing another application’s data. Data encryption on the device is certified FIPS 140-2. Additionally, the iPad and the Poll Pad application prevent unauthorized access from removable drives or any other physical medium. The device and application require an Apple developer signature to connect, which the iSync drives have to interact.

Amazon Web Services (AWS) GovCloud provides a network audit log of all threats and activity, including unauthorized access attempts using AWS Cloudwatch. This means that any unauthorized attempts to interact with ePulse EPDMS will be provided in a printable, exportable audit log.

Meraki Mobile Device Manager does not require a cloud network to enroll devices and maintain logs. Software updates or other modifications can be pushed out until after the close of an election. Similarly, if a device is stolen, it can be locked and disabled to prevent data from being accessed or modified.

File 7-4 EPoll Ease of Use

7.4 Ease of Use for the Election Official: Provide and demonstrate customer experiences via referrals and specific case studies or white papers including access, special features, and any other customer feedback.

KNOWiNK was the first to develop a voter check-in application on the iPad. We specifically selected the iPad for development of the Poll Pad application due to its user-friendly design. Apple has gone to great lengths to ensure that the device was intuitive and easy to use for people of all ages. When providing our initial training sessions, we frequently experience poll workers having familiarity with the device since they use it themselves or with grandchildren.

iPad is an industry leader in accessibility, giving the user the ability to zoom in on text and ability to enter high contrast mode, voiceover, zoom, magnifier, and several other features to aid users who require assistance. The iPad solution includes the iOS touch keyboard and has capabilities to perform voter check-in functions with ADA compliance without the need of any additional hardware.

The Poll Pad has significantly cut line lengths, average check-in times and costs to jurisdictions all over the United States. Customer experiences often include reducing the average voter check-in time to 30-35 seconds on average. Our patented scanning tray included in every Poll Pad solution puts the ID PDF417 barcode at the optimal distance from the built-in iPad camera to scan and automatically retrieve voter data. The Poll Pad also has an intuitive manual search function that requires the first three letters of the voter’s first and last name to quickly get to the correct voter data.

Our clients, poll workers and voters alike enjoy how the Poll Pad makes voter check-in and the bustle of election day a breeze. We have included in the following pages customer referrals, case studies, white papers, certification documents, special features and client quotes.

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Customer Feedback

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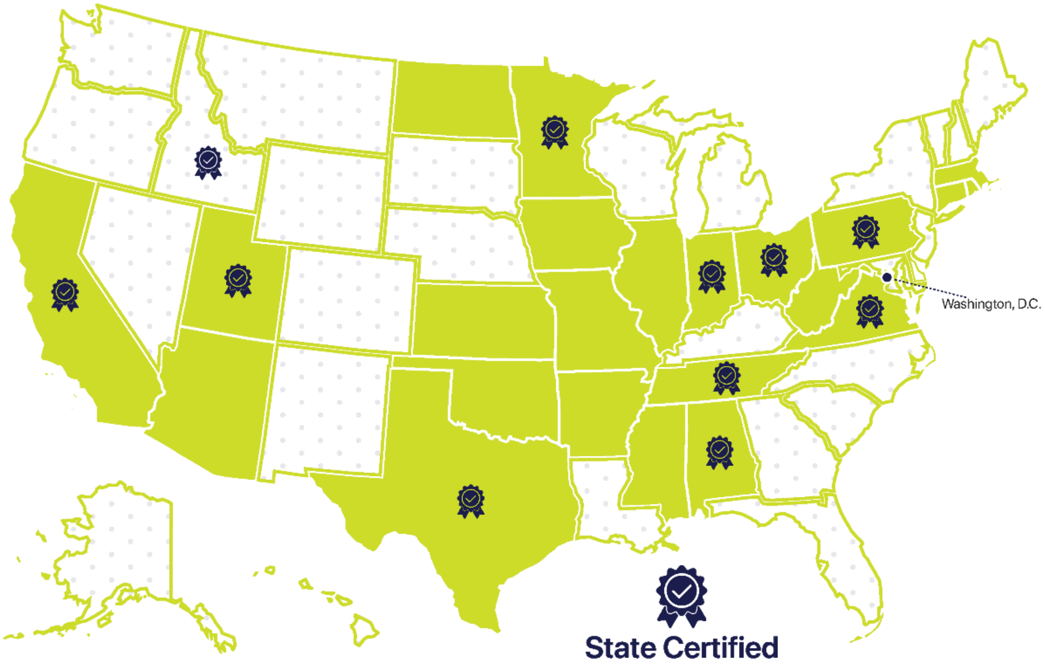
Statewide Certifications & Security White Papers

Our proven software has been the choice of 24 States and Washington, D.C. The Poll Pad has been subjected to extensive certifications processes in California, Pennsylvania and Canada and each has found our solution secure.



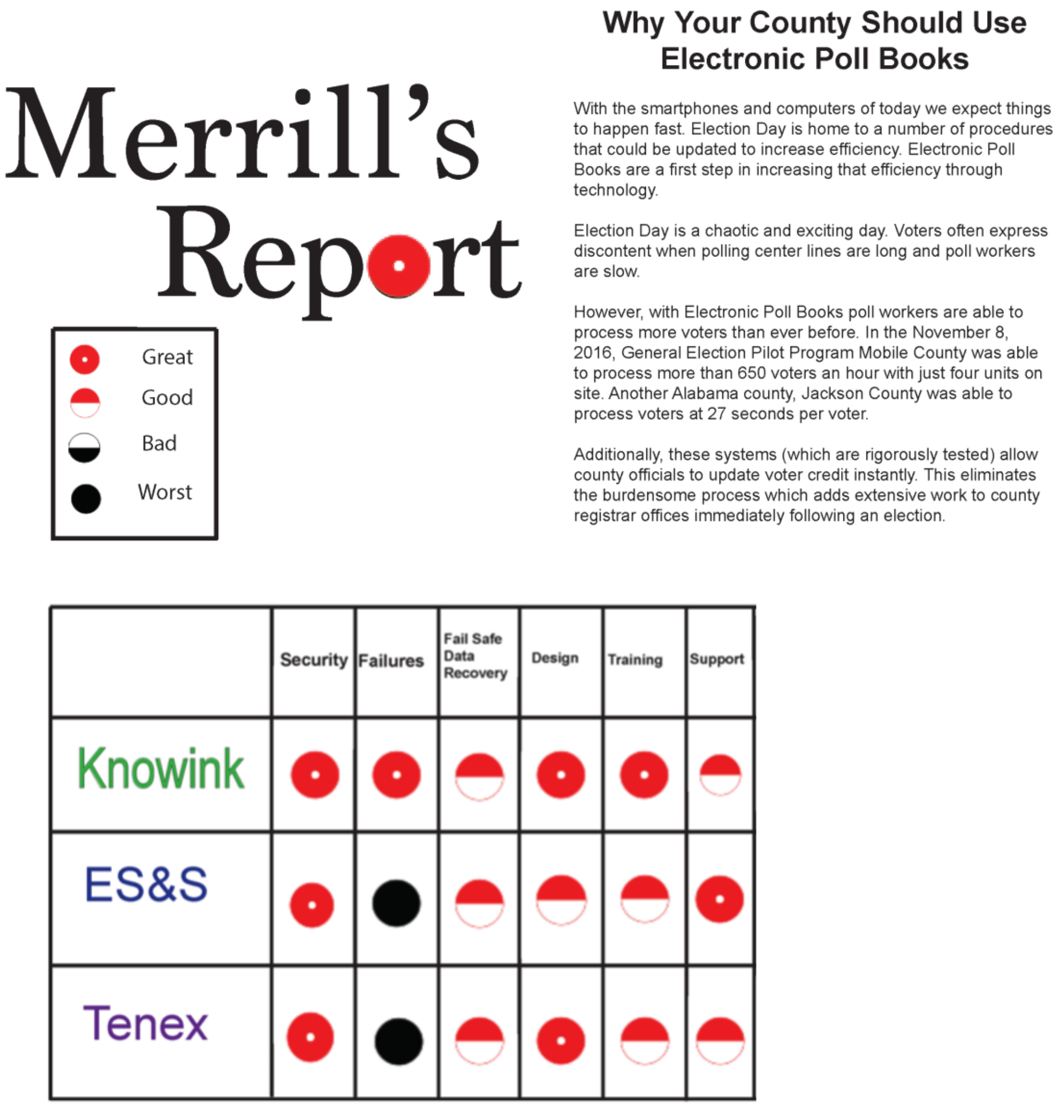
State Certified in: Alabama | California | Idaho | Indiana | Kentucky | Minnesota | Ohio | Pennsylvania | Texas | Utah | Virginia

POLL PAD NATION

Over **14,500,000** Voters Processed in 2018!

24 States plus District of Columbia | **650** Jurisdictions | **35,000** Units Deployed

Map of states in which the Poll Pad has been certified.



Merrill's Report

◉	Great
◓	Good
◒	Bad
●	Worst

Why Your County Should Use Electronic Poll Books

With the smartphones and computers of today we expect things to happen fast. Election Day is home to a number of procedures that could be updated to increase efficiency. Electronic Poll Books are a first step in increasing that efficiency through technology.

Election Day is a chaotic and exciting day. Voters often express discontent when polling center lines are long and poll workers are slow.

However, with Electronic Poll Books poll workers are able to process more voters than ever before. In the November 8, 2016, General Election Pilot Program Mobile County was able to process more than 650 voters an hour with just four units on site. Another Alabama county, Jackson County was able to process voters at 27 seconds per voter.

Additionally, these systems (which are rigorously tested) allow county officials to update voter credit instantly. This eliminates the burdensome process which adds extensive work to county registrar offices immediately following an election.

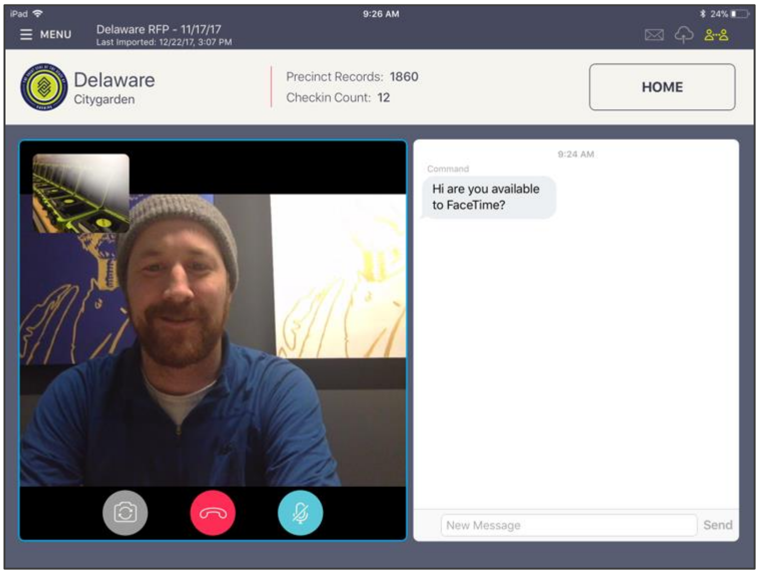
	Security	Failures	Fail Safe Data Recovery	Design	Training	Support
Knowink	◉	◉	◓	◉	◉	◓
ES&S	◉	●	◓	◓	◓	◉
Tenex	◉	●	◓	◉	◓	◓

John Merrill's report with conclusions from research of EPoll book solutions.

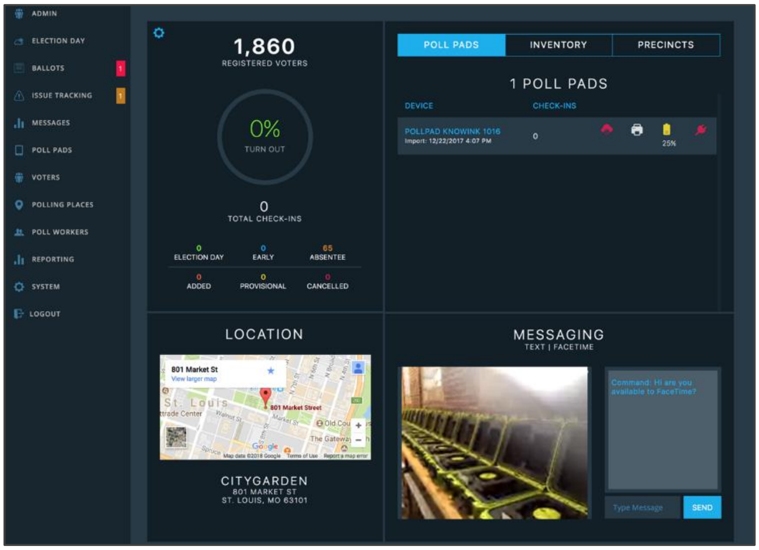
We have attached a document with white papers, security reports, and security certifications on the Poll Pad, Apple iOS, and AWS components of our solution in Section 21-3 Security Assess.

Access and Special Features

The County offices throughout the State may communicate with Poll Pads via text and video message. This includes the ability for technicians to communicate directly with poll workers to help resolve issues and see what they are experiencing in real time. ePulse provides election authorities with a powerful and complete communications tool between polling places and the County office. Customizable and pre-written messages can be sent between the Poll Pads and ePulse to communicate questions and answers. KNOWiNK's innovative video chat is embedded directly into the Poll Pad application and is an election industry first. It revolutionizes how poll workers communicate issues to the election authority by giving them a first-hand look at the polling place.



9:24 AM
Command
Hi are you available to FaceTime?



Command: Hi are you available to FaceTime?

Resolve issues in a polling place with ePulse's Video and Text Messaging capabilities.

Access and Special Features (Continued)

The application has features to accommodate and assist voters with disabilities. The Poll Pad is compliant with all federal laws regarding ADA and complies with all common language accessibility laws and guidelines in the United States. Poll Pad was designed to give the user an accessible experience, and the user interface was constructed to allow this. Several attributes were taken into account when building the application, such as contrast, type color, font point size, font family, font heaviness, spacing, and clean design.

Section 8 – Consumables/Peripherals

File 8-1 Consumables

8.1 Describe all consumables used to support the proposed SVS, including estimated life of each product, spoilage/scrap rate, manufacturer, product specifications, part numbers, and quantities required for each piece of equipment or polling place. Examples of consumables include, but are not limited to, ink cartridges, paper, replacement parts, etc.

Dominion

Consumable Item	Dominion Part	Model/Specifications	Timeline for Replacement	Quantities - Barry
ICP Cleaning Sheet	141-000008	Cleaning sheets	Dispose of sheets after each use and cleaning.	Each County to receive 5 sheets per Device.
ICP Lithium Battery	117-000512	Backup batteries	Four months before recharge. Capacity diminishes after 500 charge cycles.	Batteries have a 5-year life. Year 6 should replace all IC batteries.
ICX Lithium Battery	117-000531	Backup batteries	Four months before recharge. Capacity diminishes after 500 charge cycles.	Batteries have a 5-year life. Year 6 should replace all batteries.
ICP Paper Roll (96 foot)	123-000229	Archival thermal paper roll.	7 year retention with proper storage.	14,000 rolls have been proposed

Ballot Marking Device Printer toner	123-000340	Replacement toner	~Every 3,100 pages	Toner will last for 3,100 images per BMD. Toner should last for 15 to 20 elections.
Ballot Marking Device Paper	144-000018	3rd party paper stock 11", 14", 17", 19", 22" as applicable	As needed on a per election basis	Based on per election needs
Ballot Box Storage Boxes	125-000074	Cardboard ballot boxes for ballot transportation and storage.	As needed on a per election basis	25 boxes per carton

KNOWiNK

KNOWiNK is proposing no consumables to support the Poll Pad electronic poll book. The only potential consumable is thermal printer paper for the optional thermal Bluetooth printers. The Poll Pad uses an encoding machine and card to communicate ballot styles to Dominion's voting system, and the encoders are included in the pricing.

The GASOS has the option to move forms currently completed on paper in the polling places to Poll Pad-based forms that capture signatures electronically. With the optional thermal printer, the GASOS could also choose to complete the form on the Poll Pad and print a receipt for the voter to sign in ink.

A benefit of thermal printers is that they do not require ink cartridges. The printer's only consumable to operate are paper rolls to reload the thermal printer.

For example, thermal printer paper of the 4.48 gram economy grades, what KNOWiNK customers typically use, are rated for five to seven years life under proper storage. Proper storage is be out of UV light, heat, moisture and high humidity. Any light in general is an enemy of thermal paper. Dark storage areas are best. Relative Humidity desired at 55-65%, and the temperature should be below 77 degrees Fahrenheit.

Section 8 – Consumables/Peripherals

File 8-2 Peripherals

8.2 Describe all peripheral equipment used to support the proposed SVS. Details should include manufacturer, product specifications, part numbers, and quantities required for each piece of equipment or polling place. Peripherals should include any and all equipment that is required for use, including spare parts, memory cards, equipment stands, proprietary cables or connectors, etc. Also describe non-proprietary equipment that you can provide or provide details for items available for purchase outside of the Master Service Level Agreement (MLSA), including generic cables, extension cords, etc.

Dominion

The proposed system includes various peripheral items including:

Product	Description	Quantity
Server Kit	Includes PowerEdge R630 rack server, 24 port switch, 24" monitor, keyboard/mouse, patch cable, Cepstral, Avast.	4

EMS Workstation	Includes Dell T3420, 24" monitor, iButton programmer, high speed media reader, patch cable, smart card reader/writer. 	171
Adjudication Workstation	Includes Dell T3420, 24" monitor, SQL Server 2016 CAL, cables, Windows 10 Pro.	183

Voter Activation Cards	Smart Card to activate voting session on the ImageCast X Prime. 	3 per device

Uninterruptible Power Supply	Backup power supply for precinct locations. 	2,913
Audio Tactile Interface	Accessibility units for ImageCast X includes ATI unit, headphones and connection cord. 	2,754

Dominion has access to customized peripheral items that customers like to have from time to time. The proposed system configuration includes all peripherals needed to deploy a complete voting system to the State. Should counties desire to explore custom products such cabinets for Accessible devices, individual custom ImageCast X BMD stands, Dominion will be happy to accommodate.

EPoll Device

The Poll Pad simply requires the Apple iPad to operate. Its peripherals make the solution easy for poll workers and voters and include a swivel stand, scanning tray, thermal charging cables, and optional thermal printer to check-in voters. Each device also includes a screen cleaning cloth and two styluses. Detailed product information is on the following page.

The complete electronic Poll Pad kit.

Poll Pad has a demonstrated track record with Dominion's ImageCast Voting System and encoder card system. After checking in a voter, the Poll Pad transmits encrypted voter data to the Dominion ImageCast. This process is shown in the sample Poll Pad user guide with the Dominion ImageCast in 9-3 GASOS Train EPoll. Detailed information on the Poll Pad peripherals is provided in the table below.

EQUIPMENT FOR THE POLL PAD® ELECTRONIC POLL BOOK					
ITEM	MAKE	MODEL	SIZE	DESCRIPTION	QUANTITY PROPOSED
iPad tablet	Apple	MP2F2LL/A	12" (H) x 8.68" (L)	The iPad has a touchscreen/keyboard and a shockproof clear case. The iPad has a battery life of approx. 10 hours.	8,000
Encoder/iOS Reader	FEITAN Technologies Co., Ltd.	iR301	2.28" x 1.8" x .3	The Mfi certified lightning port contact card reader connects securely to the iPad lightning port and include a micro USB cable.	8,000
iSync Drive	KNOWiNK	iSD-110	2" x 1" x .25"	KNOWiNK's secure proprietary removable memory device, the iSync flash drives.	2,800*
Stand for iPad	AI Data	i360		The iPad stand is durable and user friendly.	8,000
Scanning tray	KNOWiNK	ISP103B-KN2-1	5" (L) x 2.5" (W) x 4.5"(H)	KNOWINK'S patented scanning trade scans barcodes on voter ID cards or state identification cards.	8,000
Styluses	AI Data	ISP-1010-KNO		Poll workers and voters may use the styluses or their finger for the iPad's capacitive touch screen.	16,000
Carrying case	Nanuk	910	14.3" x 11.1" x 4.7"	Shockproof weatherproof foam-fitted case.	8,000
Thermal printer (optional)	Star Micronics	TSP650ii	140 (W) x 132 (H) x 203.5 (D) mm	The Star Micronics printer is the original printer used with KNOWiNK's system. This printer requires AC power.	(Optional. The printer pairs with one Poll Pad.)

Section 9 – Training and Support – State Level

File 9-1 GASOS Train EMS

9.1 Provide an extensive, in-depth training plan and documentation for GASOS staff on the setup and use of the proposed EMS in creating and configuring election databases for use in Georgia elections and primaries.

We will provide the GASOS staff Election Management System (EMS) training focused on creating election databases in Election Event Designer (EED) in addition to the training provided for the counties focused on downloading data to the voting devices and uploading and reporting election night unofficial results. GASOS EMS training is scheduled for 10 days specifically designed for teaching the GASOS programmers how to program election databases for all counties. Additional training will be provided to GASOS on all county-based equipment and software modules. This training will be in advance of any county training. Our intent is to train the counties utilizing the regional organization structure already in place. The format for training GASOS on county level responsibilities will be in a train the trainer approach to enable the state to conduct future county level classes as required.

We have scheduled training at the State offices to take place prior to any regional county-level training. State level training while similar to training held regionally for the counties will emphasize specific state level functions. This includes Election Management Systems Election Event Designer training in which we will train the state on creating and programming the county databases. Additionally, we will conduct training classes for the state in all county level training(s) emphasizing more of a train the trainer approach. Scheduling the state training prior to the regional county training enables the state to play a vital key role in customization of the county level training, this also allows for standardization throughout the state.

Documentation
Dominion offers a library of documentation specific to individual roles and situations. Acceptance Check Lists, Unit Tracking Procedures, and Troubleshooting Guides are examples of items used in Preventative Maintenance and Hardware Acceptance Training. User Guides and Quick Reference Guides are examples of items used in Election Poll Worker Training. User Guides are comprehensive textual documents, covering all facets of a topic such as Vote Tabulators and Accessible Components. Quick Reference Guides

are brief, focused and image-oriented; they are designed for reference-at-a-glance in practical election situations.

Dominion will work with the State to create and customize training materials that are applicable to the State and Counties. Provided below are sample training materials in the form of links to training videos and sample training documents. Additional training material is provided in response to question 18-6 Train Sample.

VIDEO LINKS

o Election Event Designer – User Procedures: https://youtu.be/0cB9XBWfHqE

o ImageCast Central – User Procedures: https://youtu.be/3ENHzmFdMHU

o ImageCast Voter Activation – User Procedures: https://youtu.be/rhtIzWdR-do

o Results Tally & Reporting – Election Night Reports: https://youtu.be/QIlRBuaungM

o Results Transfer Manager – User Procedures: https://youtu.be/W2BjQMcaGuY

o Results Tally & Reporting – User Procedures: https://youtu.be/ghL5rBrygpA

o ImageCast X - https://www.youtube.com/playlist?list=PLsiDPMsLSeoDf3IgQnJX5oT-MecOochnH

Section 9 – Training and Support – State Level

File 9-2 GASOS Train Equip

9.2 Provide an extensive, in-depth training plan and documentation for GASOS staff on the setup and use of the proposed PPS, CSD, and BMD.

In addition to the county-level training we will also provide the GASOS staff additional equipment and setup training, which focuses on all hardware and operational procedures, as well as, polling place set-up, closing and use procedures. Additionally, we will train the state in the county specific training with a train the trainer approach to enable the state to conduct future county level classes regarding equipment and use procedures, as required.

This equipment and use procedure training for the State will take place prior to any regional county level training. State level training while similar to training held regionally for the counties will emphasize specific state level functions regarding equipment and use and emphasizing more of a train the trainer approach. Scheduling the state training prior to the regional county training enables the state to play a vital key role in customization of the county level training, this also allows for standardization throughout the state.

Since the state level training will help customize the County level training, many of the same practices will be utilized to as a starting point and then customized based on feedback from the state. This best-practices approach will include:

Dominion Training Focus and Approach

During the State level training phase, our focus will be on providing State Administrators with the necessary knowledge to implement a voting system that will smoothly and efficiently process voters to understand the process and enable them to pass along the information at a regional level. We accomplish this through training customization, utilizing various training formats, implementing adult learning principles, and proper pacing within our courses.

Training customization will include how to tailor the information to meet jurisdiction's needs. Courses cover both hardware and software, and they detail all phases of the election. One aspect of the customization is utilizing different formats when creating training, including instructor led classes in person, instructor led classes online, and self-paced online eLearning.

In all training formats, we base our training on the main principles of adult learning. Adults learn best when material is presented in a variety of ways. To this end, our trainers utilize auditory, visual, and hands-on training techniques. Our classes follow the "Explain, Demonstrate, Do" method. Students hear an explanation of their responsibilities, see it demonstrated, and then have a chance to practice it themselves. For example, our online eLearning presents case studies and step-by-step simulations to enable learners to experience the hardware or software virtually without having to unpack a voting unit.

In order to maximize retention, training classes must be properly divided and paced. In our case, poor retention means an unsuccessful election, which is unacceptable. Our training materials are divided into small, manageable pieces that enable our instructors to cover information without exhausting a student's attention span. Each section of our training lasts no longer than ninety minutes, and then a student's knowledge is thoroughly checked through hands on exercises and progress checks.

Dominion Voting understands that training must support the State and individual county election process. We work in conjunction with the State's election staff to define custom training curriculums, so they fit into the respective county's normal election practices and processes.

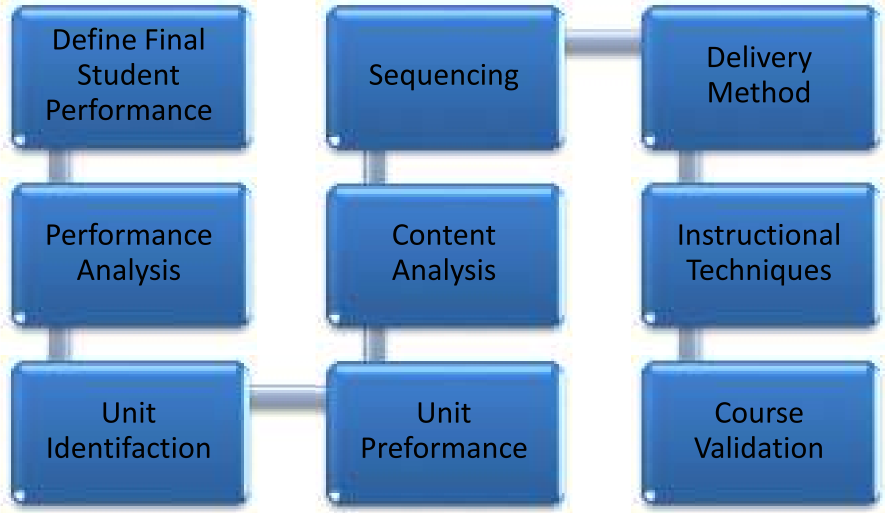
We will also work with Georgia to create custom training materials that all parties deem necessary. Any source files or camera-ready images will be available to be given to Georgia as needed.

Regional Training Approach

Dominion Voting recognizes the value of implementing a training program centered around statewide consistency and standardization of processes and procedures. Dominion Voting will work with the GASOS to understand and incorporate required and/or recommended procedures and course material into all training deliverables and make sure all trainings and training materials meet the needs of the GASOS and its counties. Prior to delivering any end-user training, Dominion Voting will customize all materials with GASOS input. Dominion Voting will host workshops at the GASOS facility or an agreed upon location and bring together the necessary resources from both the State and Dominion Voting to make sure all training materials meet the needs of all stakeholders. Thereafter, Dominion Voting will work with the GASOS to set up regional training sessions in the 14 designated state regions. Each regional site will host 2 or 3 training sessions, each designed for a targeted audience, depending on the course material to be delivered in each session. Dominion Voting recognizes the need for flexibility and will schedule additional training sessions for supplemental information to be delivered or to accommodate anyone or any county who may not have been able to attend initial training sessions if necessary. The online Self-paced e-learning modules will be available as refresher training for anyone needing such at any time.

Instructional Design

Just like the county level training approach, our instructional design at the State level will be a Nine Step Model. This model starts with defining what the final student performance is and what the goal of the course needs to be.



Once that final performance is defined for the State level courses, we consider performance analysis and identify "What is the least they need to learn?" Next, we determine Unit Identification and Unit level exercises, perform content analysis, define sequencing and delivery methods, and finally validate the course.

Conceptual Change Management Plan

Training/Change Management: The Implementation Team will be responsible for all Change Management, Operational Improvement and Training activities including the development of communication plans, organizational change management activities as well as the training required for staff and poll workers. The state-level focus will focus on enabling State elections administrators fully understand the activities that will be critical to ensuring that county level staff are transitioned from the old system to the new – that includes a review of existing functionality, procedures and processes and a documentation of new procedures and processes.

The Dominion Team will assist the GASOS in reviewing existing procedure manuals and the creation of new documentation sets to ensure that each county has the information that is required to support the system. If Change Management activities are not considered as part of the overall scope of the project – it will be difficult to initiate change and the user buy-in that is essential as part of this transition.

County & Poll worker Training / Change Management Workshop: These workshops will be designed to better understand the training requirements that will be needed to transfer knowledge of the system to designated County Staff and Poll workers. Information will be gathered to ascertain the most effective approach to provide training. Information such as the number of poll workers that will be required for successful Election Day support and the relative number of classes that will be required, are some of the items up for discussion. In addition, Change Management activities will also be discussed, such as how best to incorporate staff into the process (project newsletters, e-mail updates, etc.).

Critical to the success of a change management plan is an understanding of the current system. In addition to the initial project activity of completing an analysis of the existing system, Dominion's proposed project team includes people who were involved in the deployment of the current system. Not only will the analysis show what needs to be changed, but Dominion's team also has in depth expertise on the current Georgia system, making this process more efficient.

Training Curriculum

Dominion Voting offers the classes listed below. All classes include quick reference guides, training manuals, and technical reference manuals when necessary. Dominion Voting will work to customize Election Day training materials to suit Georgia's specific needs.

All instructors are employees of Dominion Voting and KNOWiNK.

Training Class Description	User Category	Number of Days/ Hours	Max Number of Students
D-Suite Election Management System Election Event Designer Training	GASOS	10 days	10
D-Suite Accumulation only EMS Training	GASOS, County Administrators, Division Users	2 days	10
D-Suite Results Tally and Reporting Training	GASOS, County Administrators, Division Users	1 day	10
D-Suite ICP Training	GASOS, County Administrators, Division Users	1 day	20 per class
D-Suite ICX Training	GASOS, County Administrator, Division User	1 day	10 per class
D-Suite ICC & Adjudication Training	GASOS, County Administrator, Division User	1 day	15- 20
D-Suite UOCAVA Training	GASOS, County Administrator, Division User	1 day	15-20
D-Suite Mobile Ballot Printing Training	GASOS, County Administrator, Division User	1 day	15 -20
Pollworker Train the Trainer	Poll Workers Trainers	2 days	6 per class
Election Day Rover Training	Election Day Rovers	½ day	20

Course Descriptions – Outline

Hardware operations training:

This course introduces the Dominion Voting hardware. Topics include:

- Setup of the Equipment
- Opening Polls
- Processing Ballots
- Accessible Voting
- Closing Polls
- Acceptance Testing
- Troubleshooting
- Performing L&A

Democracy Suite EMS Training:

This course conducted at the State level introduces election programming concepts in EMS. Topics include:

- Creating and Editing Geo-political Data
- Creating and Editing Offices and Contests
- Adding Choices
- Creating and Editing Ballot Layout
- Creating Audio Files
- Creating Memory Cards
- Creating project backups for delivery to the county
- Tabulating Results
- Election Night Reporting

Democracy Suite Accumulation Only EMS Training:

This course introduces Counties to concepts in EMS. Topics include:

- Loading and restoring an election from backup
- Adding Choices
- Creating Memory Cards
- Tabulating Results
- Election Night Reporting

Election Day Rover Training:

This course provides familiarity with Dominion Voting hardware and teaches what is required to support the equipment on Election Day. The major emphasis in this course is on election equipment troubleshooting.

- Preparing for Election Day
- Opening and Closing the polls
- Processing Voters
- Assisting Voters with Special Needs
- Troubleshooting Election Day Problems

Train the Trainer Poll Worker Training:

This course is a train the trainer course that covers how to train Election Day poll workers. This course focuses on teaching trainers how to become better at delivering training, along with covering everything to be included in a poll worker training class. Topics include:

- Training Techniques
- Learning Styles
- Presentation Skills
- Preparing for Election Day
- Opening and Closing the Polls
- Processing Voters
- Assisting Voters with Special Needs
- Managing the Polling Place

Section 9 – Training and Support – State Level

File 9-3 GASOS Train EPoll

9.3 Provide extensive, in-depth training plan and documentation for GASOS staff on the setup and use of the proposed EPDMS and EPolls.

The KNOWiNK training staff will use a training methodology which has been proven successful with our 650 jurisdiction client base. This methodology is designed by Connie Schmidt, CMC, CERA and focuses on a hands-on approach to end user (poll worker) training. This allows the end user to develop a comfort and confidence in their ability to use the Poll Pad solution on Election Day.

For the GASOS, we propose two days of on-site training using the curriculum outlined below.

Our suggested training approach is an easily repeatable process and offers the advantage of being successfully tested time and time again. That being said, we are more than happy to accommodate the GASOS's unique vision for training procedures and want you and your poll workers to have the best training experience.

Our robust and comprehensive training program is focused on three main components to successfully administer the Poll Pad solution without the need for a KNOWiNK staff member intervening in any manner beyond providing requested support. The three areas of focus during training are:

- Meraki Mobile Device Management system training
- ePulse training
- Train the trainer

Meraki Mobile Device Management System training
This training focuses on teaching the end user how to manage their Poll Pads within the Meraki Mobile Device Management (MDM) system. Here, end users are trained on updating Poll Pad applications, ensuring proper restrictions are set, and how to monitor/remote wipe devices if needed. The objective of this course is to ensure that the End User understands the administrative components of the Meraki MDM system in which the Poll Pads are enrolled.

ePulse Training
ePulse is the backend election management system where the end user will be building elections, monitoring Poll Pads, and generating reports. This training is an in-depth walkthrough (or workshop) where the KNOWiNK trainer will provide detailed instructions on each component and then assist the end user in building an Election start to finish. The objective of this course is ensuring the end user feels comfortable and confident to prepare for, create, administer, and close out an election.

Train the Trainer

Train the trainer serves a dual purpose in our training modality. The first purpose is to train the end user in the KNOWiNK recommended manner of poll worker training. The second purpose is the detailed walkthrough of the Poll Pad solution as presented to the poll workers and voting public. This class covers the experience on Election Day beginning with the set-up of the Poll Pad solution, then moving through the various screen, statuses, and functionalities available. Following the walkthrough of the Poll Pad, the trainer will then consult with the End User to optimize Poll Worker Training and ensure the Poll Pad solution is configured to meet all the needs of the End User. The objective of this course is to ensure that the End User understands the functionality of the Poll Pad and is prepared to conduct training courses for their Poll Workers moving forward.

Prior to delivering specialized training curriculum to the GASOS, our team will meet with your staff and review existing training curriculum and polling place operations to evaluate how the new EPBs will work to closely match existing policies and procedures to ensure ease of understanding, familiar terminology and workflow.

Complimentary Webinar Training

In addition to the on-site training provided by KNOWiNK to train GASOS personnel on the Poll Pad solution, we also offer complimentary webinar trainings for subsequent elections at no cost to the GASOS and its Counties.

Available Webinars Post On-Site Training

- 2 Hours - ePulse (A refresher course allowing the jurisdictions and GASOS to ask specific ePulse related questions and improve comfortability with the Poll Pad solution's backend systems.)
- 1 Hour - Poll Pad (A course designed to walk through the different voter scenarios and features the Poll Pad solution provides.)

Training Facility Requirements

While KNOWiNK's Training is flexible enough to be utilized in most facilities, we do have an optimal facility configuration:

The room should be large enough for each attendee to be able to have their own Poll Pad to practice on (two square feet of table space)

- Internet connectivity is not required
- 2 HDMI capable Screens
- If using printers, then power outlet for each unit

KNOWiNK's Training staff will send out a detailed site survey prior to arrival in order to ensure that the GASOS and any attendees are set up for success.

On-Site Training Curriculum

Day 1: New Client Training | 8 hours

- 8:00AM-10:00AM - ePulse and Election building
- 10:00AM-12:00PM - Poll Pad Train-the-Trainer
- 12:00PM-1:00PM - Break
- 1:00PM-3:00PM - Post-election Poll Pad and ePulse
- 3:00PM-5:00PM - Open Session and Question and Answer

Day 2: Technical Staff Trainings | 6-8 Hours

- (No times listed due to the desire to be flexible for different staffing needs)
- (2-3 Hours) Technical Administrators Training
- (2-3 Hours) Technical Operations Staff and Support Staff Training
- (2 Hours) Meraki MDM Training

We are flexible and happy to work with the GASOS to adjust and customize the training as needed to fit your specific needs to test and deploy Poll Pad to its jurisdiction.

Typical Training Materials Provided by KNOWiNK

KNOWiNK will provide the GASOS with a variety of training materials including step by step user guides and checklists, videos, PowerPoint created specifically for the GASOS, and additional supplemental tools used for training.

Examples:

- ePulse – Operations Guide
- Meraki – Operations Guide
- Poll Pad – Administrator Operations Guide
- Poll Pad – Poll Worker Guide
- Poll Pad – Train-the-Trainer PowerPoint
- Poll Pad – Election Day Overview Video
- Poll Pad – Opening and Closing Checklists
- Poll Pad – Troubleshooting Guide
- Poll Pad – Logic and Accuracy Checklist
- MiFi – Quick Reference Sheet

Section 10 – Training and Support – County Level

File 10-1 County Training

10-1 Provide an extensive, in-depth training plan for county election officials on the setup and use of the proposed PPS, CSD, and BMD. Include a diagram of Advance-In Person voting and Election Day setup of all proposed SVS components.

Dominion

Dominion will work closely with Georgia to ensure that the training program is customized to meet your specific needs. Dominion will prepare and provide all needed training material, which includes training manuals, quick reference guides, website instructional courses and technical reference manuals when necessary. Training and curriculum particular to the resources, staff, and needs of Georgia will be customized as part of the implementation meetings and materials will be provided before implementation for both hardware and software functions. In addition to the formal training, our specialists will work to transfer the required knowledge and skills relevant to County staffs, with the objective of ensuring that each county is empowered to manage all aspects of the system's availability and functionality. Dominion takes pride in our ability to transfer to local officials the skills necessary to conduct even complex elections with autonomy.

Dominion's training shall focus on providing the election administration staff the necessary knowledge, as determined by the Project Management Team for successful implementation and effective operation of the voting system. Dominion's training shall be tailored, using various formats, implementing adult learning principles, and proper course pacing. Training customization begins with tailoring the courses covering hardware and software system operations, pollworker train the trainer and voter outreach. Dominion will provide training regionally, on and off-site and coordinate all scheduling with each County.

<u>Dominion Training Focus and Approach</u>

At Dominion Voting Systems our training platforms focus on providing poll workers and election administration staff with the necessary knowledge to implement a voting system that will smoothly and efficiently process voters. We accomplish this through training customization, utilizing various training formats, implementing adult learning principles, and proper pacing within our courses.

Training customization begins with tailoring our courses to a specific jurisdiction's needs. Courses cover both hardware and software, and they detail all phases of the election. One aspect of the customization is utilizing different formats when creating training, including instructor led classes in person, instructor led classes online, and self-paced online eLearning.

In all training formats, we base our training on the main principles of adult learning. Adults learn best when material is presented in a variety of ways. To this end, our trainers utilize auditory, visual, and hands-on training techniques. Our classes follow the “Explain, Demonstrate, Do” method. Students hear an explanation of their responsibilities, see it demonstrated, and then have a chance to practice it themselves. For example, our online eLearning presents case studies and step-by-step simulations to enable learners to experience the hardware or software virtually without having to unpack a voting unit.

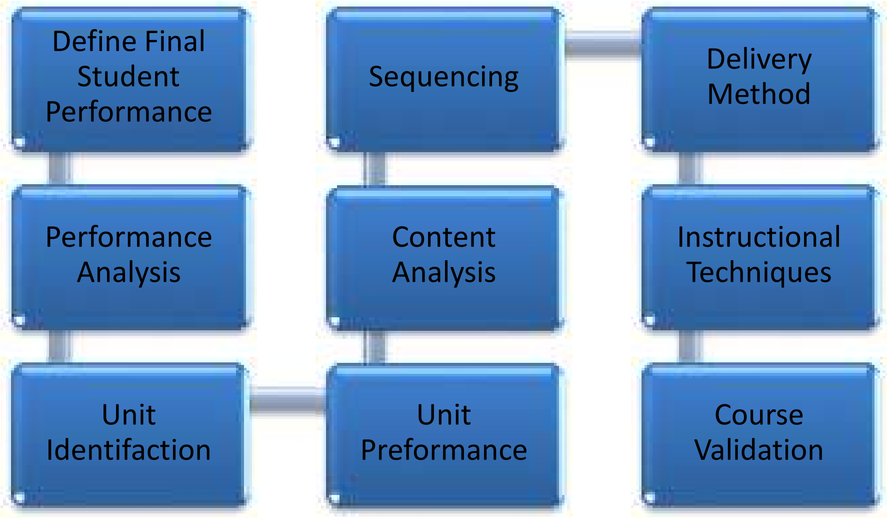
In order to maximize retention, training classes must be properly divided and paced. In our case, poor retention means an unsuccessful election, which is unacceptable. Our training materials are divided into small, manageable pieces that enable our instructors to cover information without exhausting a student’s attention span. Each section of our training lasts no longer than ninety minutes, and then a student’s knowledge is thoroughly checked through hands on exercises and progress checks.

Dominion Voting understands that training must support the local state and county election process. We work in conjunction with the State’s election staff to define custom training curriculums, so they fit into the respective county's normal election practices and processes.

We will also work with Georgia to create any custom training materials that all parties deem necessary. Any source files or camera-ready images will be available to be given to Georgia as needed.

Instructional Design

At Dominion Voting our instructional design follows a Nine Step Model. This model starts with defining what the final student performance is and what the goal of the course needs to be.



Once that final performance is defined, we consider performance analysis and identify "What is the least they need to learn?" Next, we determine Unit Identification and Unit level exercises, perform content analysis, define sequencing and delivery methods, and finally validate the course.

Delivery Methodology

At Dominion Voting we strive for the best customer service in the business and our flexibility to deliver training in multiple formats gives our customers a choice of many different delivery methods for training.

Instructor Led – Training conducted on-site with a certified election systems trainer. These in person classes are structured to provide the students the best opportunity to learn with a face to face trainer. All Dominion Voting Training courses are offered in this delivery method. Training for the GASOS staff will be conducted in the Dominion facility or in the SOS offices, whichever is deemed appropriate. This type of training is intended to be provided regionally for the Counties and can be conducted in a specific county as well.

Instructor Led Web Based – The instructor led WebEx classes are ideal for customers who need to be trained but onsite training is not possible. These classes are structured with online instructor led lectures and discussion along with offline homework and lab assignments. Web Based blended classes are offered for any of Dominion Voting's software training courses.

Self-Paced e-learning – Dominion Voting offers a complete library of self-paced e-learning courses which includes both hardware and software training. These courses are designed to deliver training in a unique format while keeping the student engaged and active.

Our online training courses provide step-by-step explanations of the needed information. We use the best eLearning tools to create interactive and engaging training. At the end of a course, a student is required to pass an assessment to receive a certificate of completion.

Conceptual Change Management Plan

Training/Change Management: The Implementation Team will be responsible for all Change Management, Operational Improvement and Training activities including the development of communication plans, organizational change management activities as well as the training required for staff and poll workers. It is imperative that there is strong on-the-ground presence with respect to training and change management and that the proposed team members are fully aware of the current state of the project, at all times.

Although many Vendors will propose training as part of the overall project scope, they will leave out a critical component in managing the implementation of the new system: the people it will affect. Change Management activities are critical to ensuring that staff are transitioned from the old system to the new – that includes a review of existing functionality, procedures and processes and a documentation of new procedures and processes. The Dominion Team will assist the GASOS in reviewing existing procedure manuals and the creation of new documentation sets to ensure that each county has the information that is required to support the system. If Change Management activities are not considered as part of the overall scope of the project – it will be difficult to initiate change and the user buy-in that is essential as part of this transition.

County & Poll worker Training / Change Management Workshop: These workshops will be designed to better understand the training requirements that will be needed to transfer knowledge of the system to designated County Staff and Poll workers. Information will be gathered to ascertain the most effective approach to provide training. Information such as the number of poll workers that will be required for successful Election Day support and the relative number of classes that will be required, are some of the items up for discussion. In addition, Change Management activities will also be discussed, such as how best to incorporate staff into the process (project newsletters, e-mail updates, etc.).

Critical to the success of a change management plan is an understanding of the current system. In addition to the initial project activity of completing an analysis of the existing system, Dominion's proposed project team includes people who were involved in the deployment of the current system. Not only will the analysis show what needs to be changed, but Dominion's team also has in depth expertise on the current Georgia system, making this process more efficient.

Regional Training Approach

Dominion Voting recognizes the value of implementing a training program centered around statewide consistency and standardization of processes and procedures. Dominion

Voting will work with the GASOS to understand and incorporate required and/or recommended procedures and course material into all training deliverables and make sure all trainings and training materials meet the needs of the GASOS and its counties.

Prior to delivering any end-user training, Dominion Voting will customize all materials with GASOS input. Dominion Voting will host workshops at the GASOS facility or an agreed upon location and bring together the necessary resources from both the State and Dominion Voting to make sure all training materials meet the needs of all stakeholders. Thereafter, Dominion Voting will work with the GASOS to set up regional training sessions in the 14 designated state regions. Each regional site will host 2 or 3 training sessions, each designed for a targeted audience, depending on the course material to be delivered in each session. Dominion Voting recognizes the need for flexibility and will schedule additional training sessions for supplemental information to be delivered or to accommodate anyone or any county who may not have been able to attend initial training sessions if necessary. The online Self-paced e-learning modules will be available as refresher training for anyone needing such at any time.

Training Curriculum

Dominion Voting offers the classes listed below. All classes include quick reference guides, training manuals, and technical reference manuals when necessary. Dominion Voting will work to customize Election Day training materials to suit the Georgia's specific needs.

All instructors are employees of Dominion Voting.

Training Class Description	User Category	Number of Days/ Hours	Max Number of Students
D-Suite Election Management System Election Event Designer Training	GASOS	10 days	10
D-Suite Accumulation only EMS Training	GASOS, County Administrators, Division Users	2 days	10
D-Suite Results Tally and Reporting Training	GASOS, County Administrators, Division Users	1 day	10
D-Suite ICP Training	GASOS, County Administrators, Division Users	1 day	20 per class
D-Suite ICX Training	GASOS, County Administrator, Division User	1 day	10 per class
D-Suite ICC & Adjudication Training	GASOS, County Administrator, Division User	1 day	15- 20
D-Suite UOCAVA Training	GASOS, County Administrator, Division User	1 day	15-20
D-Suite Mobile Ballot Printing Training	GASOS, County Administrator, Division User	1 day	15 -20
Pollworker Train the Trainer	Poll Workers Trainers	2 days	6 per class
Election Day Rover Training	Election Day Rovers	½ day	20

Course Descriptions – Outline

Hardware operations training:
This course introduces the Dominion Voting hardware. Topics include:

- Setup of the Equipment
- Opening Polls
- Processing Ballots
- Accessible Voting
- Closing Polls

- Acceptance Testing
- Troubleshooting
- Performing L&A

Democracy Suite EMS Training:
This course introduces election programming concepts in EMS. Topics include:

- Creating and Editing Geo-political Data
- Creating and Editing Offices and Contests
- Adding Choices
- Creating and Editing Ballot Layout
- Creating Audio Files
- Creating Memory Cards
- Tabulating Results
- Election Night Reporting

Election Day Rover Training:
This course provides familiarity with Dominion Voting hardware and teaches what is required to support the equipment on Election Day. The major emphasis in this course is on election equipment troubleshooting.

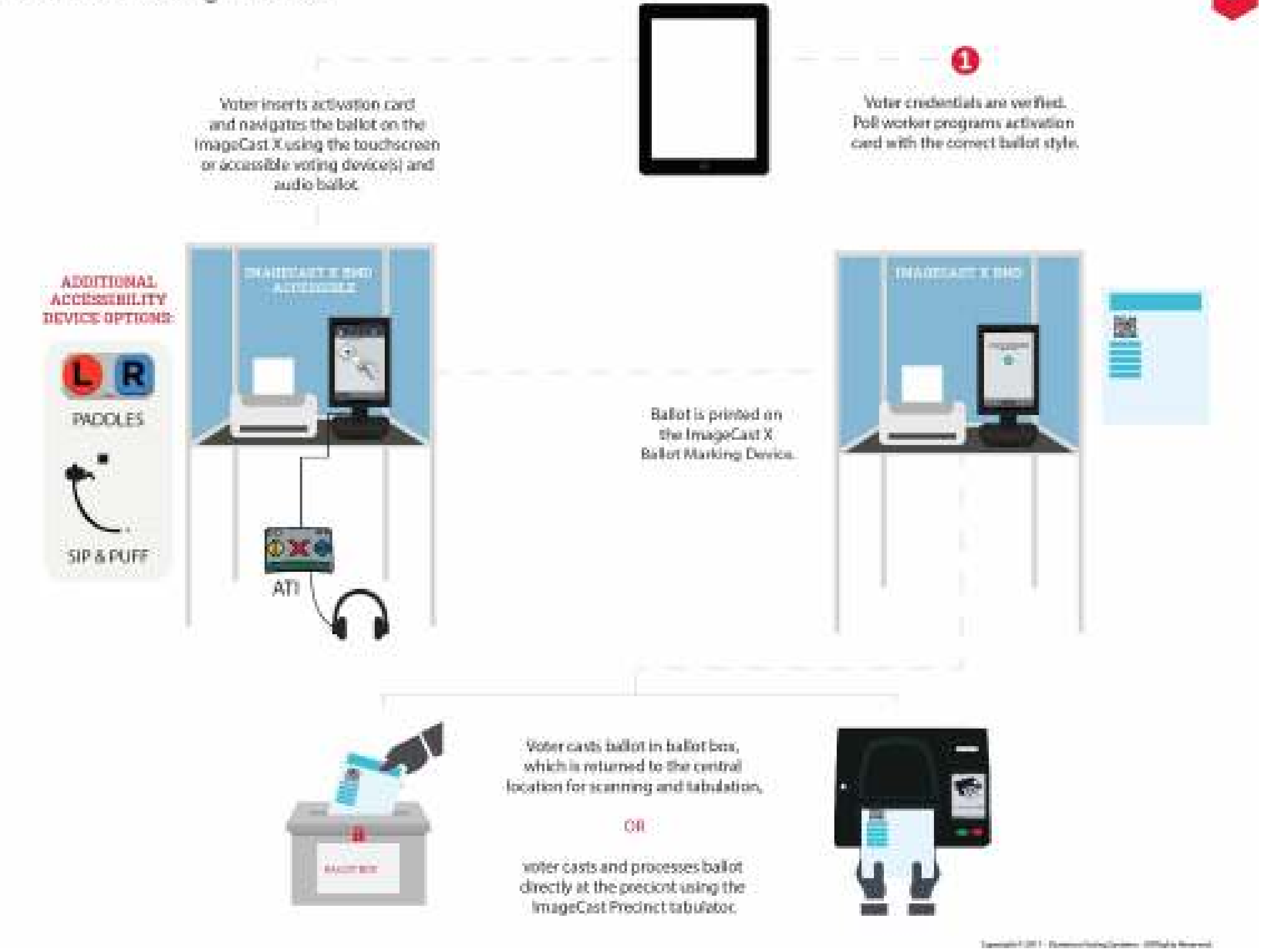
- Preparing for Election Day
- Opening and Closing the polls
- Processing Voters
- Assisting Voters with Special Needs
- Troubleshooting Election Day Problems

Train the Trainer Poll Worker Training:
This course is a train the trainer course that covers how to train Election Day poll workers. This course focuses on teaching trainers how to become better at delivering training, along with covering everything to be included in a poll worker training class. Topics include:

- Training Techniques
- Learning Styles
- Presentation Skills
- Preparing for Election Day
- Opening and Closing the Polls
- Processing Voters
- Assisting Voters with Special Needs
- Managing the Polling Place

Diagram below shows the typical in-person voting process:

In-Person Voting Process


1
ADDITIONAL ACCESSIBILITY DEVICE OPTIONS:
PADDLES
SIP & PUFF
IMAGECAST X BMD ACCESSIBLE
ATI
IMAGECAST X BMD
BALLOT BOX

Voter credentials are verified. Poll worker programs activation card with the correct ballot style.

Voter inserts activation card and navigates the ballot on the ImageCast X using the touchscreen or accessible voting device(s) and audio ballot.

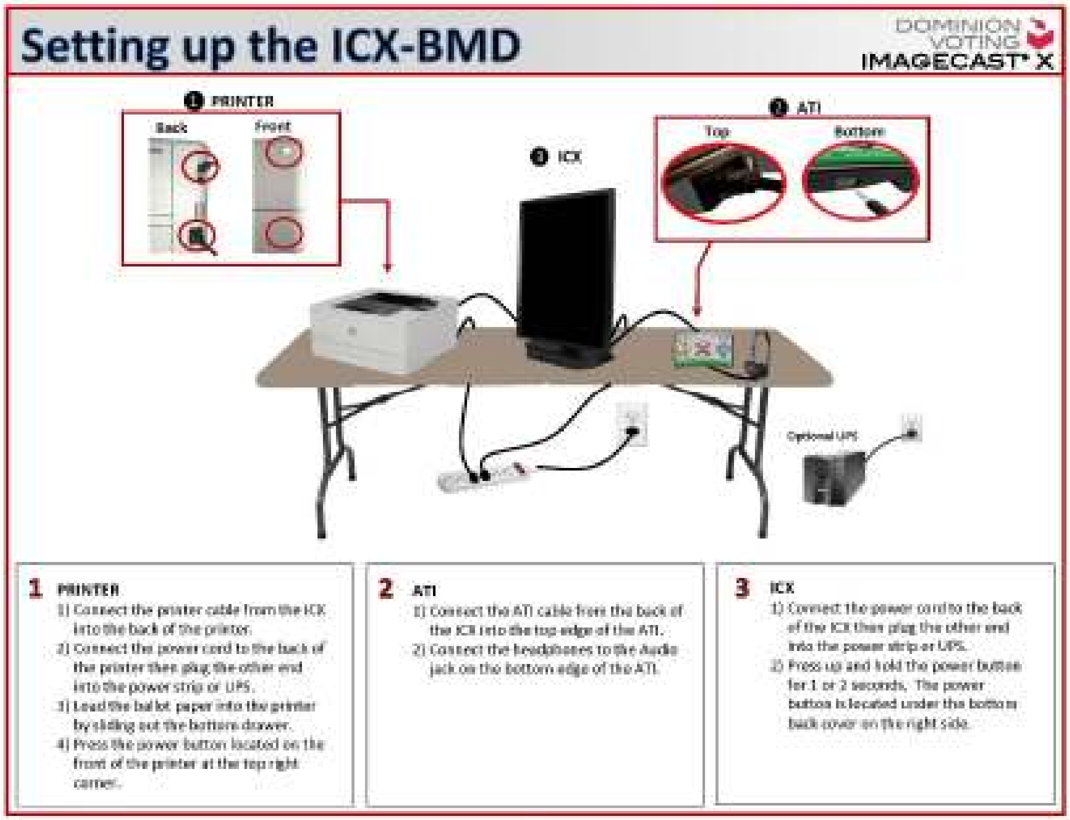
Ballot is printed on the ImageCast X Ballot Marking Device.

Voter casts ballot in ballot box, which is returned to the central location for scanning and tabulation,

OR

voter casts and processes ballot directly at the precinct using the ImageCast Precinct tabulator.

Sample setting up the ImageCast X


DOMINION VOTING
IMAGECAST X
1 PRINTER
Back
Front
3 ICX
2 ATI
Top
Bottom
Optional UPS

Setting up the ICX-BMD

1 PRINTER

1) Connect the printer cable from the ICX into the back of the printer.
2) Connect the power cord to the back of the printer then plug the other end into the power strip or UPS.
3) Load the ballot paper into the printer by sliding out the bottom drawer.
4) Press the power button located on the front of the printer at the top right corner.

2 ATI

1) Connect the ATI cable from the back of the ICX into the top edge of the ATI.
2) Connect the headphones to the Audio jack on the bottom edge of the ATI.

3 ICX

1) Connect the power cord to the back of the ICX then plug the other end into the power strip or UPS.
2) Press up and hold the power button for 1 or 2 seconds. The power button is located under the bottom back cover on the right side.

KNOWiNK

The KNOWiNK training staff will use a training methodology which has been proven successful with our 650 jurisdiction client base. This methodology is designed by Connie Schmidt, CMC, CERA and focuses on a hands-on approach to end user (poll worker) training. This allows the end user to develop a comfort and confidence in their ability to use the Poll Pad solution on Election Day.

For County election official trainings, we suggest hosting regional trainings organized by the State's 14 regions. Each region will be offered two dates to attend a one-day class of training using similar curriculum as the GASOS training but tailored to County specific responsibilities. The proposed training curriculum is described below.

Our suggested training approach is an easily repeatable process and offers the advantage of being successfully tested time and time again. That being said, we are more than happy to accommodate the County's unique vision for training procedures and want you and your poll workers to have the best training experience.

Our robust and comprehensive training program is focused on two main components to successfully administer the Poll Pad solution without the need for a KNOWiNK staff member intervening in any manner beyond providing requested support. The three areas of focus during training are:

- ePulse training
- Train the trainer

ePulse Training

ePulse is the backend election management system where the end user will be building elections, monitoring Poll Pads, and generating reports. This training is an in-depth walkthrough (or workshop) where the KNOWiNK trainer will provide detailed instructions on each component and then assist the end user in building an Election start to finish. The objective of this course is ensuring the end user feels comfortable and confident to prepare for, create, administer, and close out an election.

Train the Trainer

Train the trainer serves a dual purpose in our training modality. The first purpose is to train the end user in the KNOWiNK recommended manner of poll worker training. The second purpose is the detailed walkthrough of the Poll Pad solution as presented to the poll workers and voting public. This class covers the experience on Election Day beginning with the set-up of the Poll Pad solution, then moving through the various screen, statuses, and functionalities available. Following the walkthrough of the Poll Pad, the trainer will then consult with the End User to optimize Poll Worker Training and ensure the Poll Pad solution is configured to meet all the needs of the End User. The objective of this course is to ensure that the End User understands the functionality of the Poll Pad and is prepared to conduct training courses for their Poll Workers moving forward.

Meraki Mobile Device Management System training

KNOWiNK recommends only large jurisdictions manage their own MDM systems. We can work with the GASOS and its jurisdictions to determine which (IF ANY) should be managed independently and which should be managed by KNOWiNk or the GASOS.

This training focuses on teaching the end user how to manage their Poll Pads within the Meraki Mobile Device Management (MDM) system. Here, end users are trained on updating Poll Pad applications, ensuring proper restrictions are set, and how to monitor/remote wipe devices if needed. The objective of this course is to ensure that the End User understands the administrative components of the Meraki MDM system in which the Poll Pads are enrolled.

Prior to delivering specialized training curriculum to the County, our team will meet with your staff and review existing training curriculum and polling place operations to evaluate how the new EPBs will work to closely match existing policies and procedures to ensure ease of understanding, familiar terminology and workflow.

Complimentary Webinar Training

In addition to the on-site training provided by KNOWiNK to train County personnel on the Poll Pad solution, we also offer complimentary webinar trainings for subsequent elections at no cost to the County.

Available Webinars Post On-Site Training

- 2 Hours - ePulse (A refresher course allowing the county to ask specific ePulse related questions and improve comfortability with the Poll Pad solution's backend systems.)
- 1 Hour - Poll Pad (A course designed to walk through the different voter scenarios and features the Poll Pad solution provides.)

Training Facility Requirements

While KNOWiNK's Training is flexible enough to be utilized in most facilities, we do have an optimal facility configuration:

The room should be large enough for each attendee to be able to have their own Poll Pad to practice on (two square feet of table space)

- Internet connectivity is not required
- 2 HDMI capable Screens
- If using printers, then power outlet for each unit

KNOWiNK's Training staff will send out a detailed site survey prior to arrival in order to ensure that the County and any attendees are set up for success.

On-Site Training Curriculum

New Client Training

- 8:00am-10:00AM - ePulse and Election Building
- 10:00AM-12:00PM - Poll Pad Set-up and Train-the-Trainer
- 12:00PM-1:00PM - Break
- 1:00PM-2:00PM - Train-the-Trainer Consultation
- 2:00PM-3:00PM - Post-Election Poll Pad and ePulse
- 3:00PM-4:00PM - Training Breakdown and Q/A over Best Practices and Feedback

Typical Training Materials Provided by KNOWiNK

KNOWiNK will provide the County with a variety of training materials including step by step user guides and checklists, videos, PowerPoint created specifically for the county, and additional supplemental tools utilized for training.

Examples:

- ePulse – Operations Guide
- Poll Pad – Administrator Operations Guide
- Poll Pad – Poll Worker Guide
- Poll Pad – Train-the-Trainer PowerPoint
- Poll Pad – Election Day Overview Video
- Poll Pad – Opening and Closing Checklists
- Poll Pad – Troubleshooting Guide
- Poll Pad – Logic and Accuracy Checklist

Section 10 – Training and Support – County Level

File 10-2 County Train Docs

Dominion

Dominion offers a library of documentation specific to individual roles and situations. Acceptance Check Lists, Unit Tracking Procedures, and Troubleshooting Guides are examples of items used in Preventative Maintenance and Hardware Acceptance Training. User Guides and Quick Reference Guides are examples of items used in Election Poll Worker Training. User Guides are comprehensive textual documents, covering all facets of a topic such as Vote Tabulators and Accessible Components. Quick Reference Guides are brief, focused and image-oriented; they are designed for reference-at-a-glance in practical election situations.

In addition to providing the full EAC Technical Data Package provided in response to question 18-1 TDP, we will work with the State and Counties to develop and tailor online video training, election day manuals, and quick reference guides specific to statewide and county-specific needs. Samples of documentation include the following embedded files:

Pollworker_guide_ICX_Prime_SC.pdf
ICP Pollworker Training Guide no n
Accum Only Training Manual 5.5
ADJ QRG v1.0.pptx
ICC QRG v1.0.pptx
ICP NO AVS QRG Plastic BB.pptx
ICX Prime-BMD QRG v1.1 Updated 3-19
RTR QRG v1.0.pptx

In-Person Training

Dominion will provide on-site, hands-on training sessions for hardware acceptance training, preventative maintenance training, commissioner trainer training, COC, ROV and other election staff training. Past implementations have proven that it is very important for all using the equipment to have the opportunity to handle and operate the vote tabulator and accessible voting components in a hands-on class setting.

Self-Study Materials

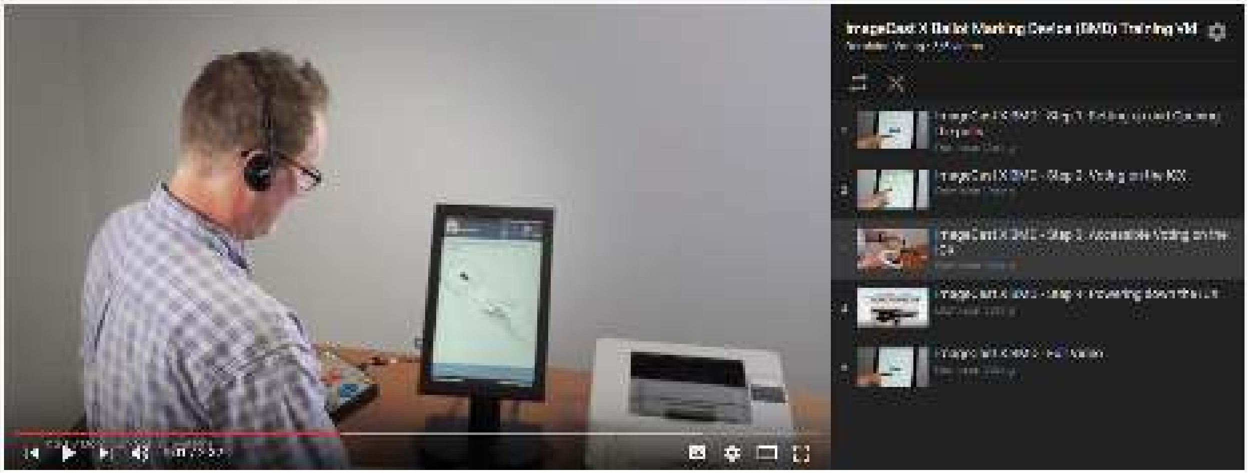
Dominion provides an array of self-study materials, suited to individual approaches to learning. These include self-paced online eLearning courses, online instructional videos, and documents. We can share and provide materials to be used in the videos that the State creates of their Commissioner training and other media.

Self-Paced E-Learning

Dominion offers a complete library of self-paced e-learning courses, which include both hardware and software training. These courses are designed to deliver training in a unique format, while keeping the learner engaged and active. Our online training courses provide step-by-step explanations of the needed information. We use the best eLearning tools such as Captivate and Articulate to create interactive and engaging training. At the end of a course, a student is required to pass an assessment in order to receive a certificate of completion.

Online Instructional Videos

Dominion offers a library of online, on-demand instructional videos, covering a range of topics such tabulator and accessible voting on the ImageCast X. The videos provide step-by-step explanations of the particular topic, and are divided into chapters for quick and easy reference.



Dominion will work with the State to create and customize training materials that are applicable to the State, Parishes and your constituents. We provide below some sample training materials in the form of links to training videos and some sample training documents. These materials can be used to supplement the training videos that your office creates for DVD distribution to the parish offices.

VIDEO LINKS

o Election Event Designer – User Procedures: https://youtu.be/0cB9XBWfHqE
o ImageCast Central – User Procedures: https://youtu.be/3ENHzmFdMHU
o ImageCast Voter Activation – User Procedures: https://youtu.be/rhtIzWdR-do
o Results Tally & Reporting – Election Night Reports: https://youtu.be/QIlRBuaungM
o Results Transfer Manager – User Procedures: https://youtu.be/W2BjQMcaGuY
o Results Tally & Reporting – User Procedures: https://youtu.be/ghL5rBrygpA

o ImageCast X - https://www.youtube.com/playlist?list=PLsiDPMsLSeoDf3IgQnJX5oT-MecOochnH

Below we provide a general point by point response detailing where each topic is covered.

10.2 Provide a training plan and documentation to each county elections office on, at minimum, the following:

1. Loading prepared election database to EMS.

Covered in EMS EED training and Accumulation only EMS training.

2. Setting amount of Absentee by Mail scanning, Absentee In-Person voting, Election-Day use, and Provisional scanning equipment in EMS to be used for a given election.

Covered in EMS EED training and Accumulation only EMS training

3. Viewing and printing pre-election proofing reports from EMS.

Covered in EMS EED training and Accumulation only EMS training

4. Preparing necessary election media from EMS for use in the proposed PPS, CSD, and BMD.

Covered in EMS EED training and Accumulation only EMS training

5. Preparing and testing equipment for Absentee by Mail scanning, Absentee In-person voting, Election Day use, and Provisional scanning.

Covered in hardware training for the specific equipment. We also encourage using county rovers and or pollworkers to assist with logic and accuracy testing. This gives those election day workers the opportunity to become more familiar with the equipment

6. Configuring and sealing equipment for Absentee by Mail scanning, Absentee In-person voting, Election Day use, and Provisional scanning.

Covered in hardware training for the specific equipment. We also encourage using county rovers and or pollworkers to assist with logic and accuracy testing. This gives those election day workers the opportunity to become more familiar with the equipment

7. Absentee In-Person voting equipment opening and closing procedures (PPS, BMD, EPoll).

Covered in Pollworker training, rover training and throughout logic and accuracy testing

8. Election Day equipment opening and closing procedures (PPS, BMD, EPoll).

Covered in Pollworker training, rover training and throughout logic and accuracy testing

9. Polling scanning procedures.

Covered in Pollworker training, rover training and throughout logic and accuracy testing

10. Central scanning procedures.

Covered in ICC and Adjudication training

11. Transitioning equipment from Absentee In-person voting use to Election Day use.

Covered in rover training and ICX training

12. Basic equipment troubleshooting, while in use.

Covered in Pollworker training, rover training and throughout logic and accuracy testing

13. Removing and securing collected ballots and removable media.

Covered in Pollworker training, rover training and throughout logic and accuracy testing

14. Recovering archived data from internal memory (PPS, EPoll, and CSD).

Covered in EMS EED and Accumulation only EMS training

15. Uploading removable media to EMS.

Covered in RTR training

16. Producing tabulation reports from EMS.

Covered in RTR training

17. Generating export files from EMS for Election Night Reporting (ENR).

Covered in RTR training

18. Preparing post-election documentation from EMS.

Covered in EMS EED and Accumulation only EMS training and RTR training

19. Preparing finalized copy of election results from EMS for delivery to GASOS for certification.

Covered in RTR training

20. Conducting recounts.

Basic recount training covered in EMS EED and Accumulation only EMS training.

21. Conducting post-election audits.

Covered in EMS EED and Accumulation only EMS training, specific curriculum would be developed with the state to coincide with audit procedures used in the state.

22. Proper storage and maintenance of all SVS components.

Covered in hardware specific training

Although we have existing curriculum designed to cover each topic detailed above, we look forward to working with the State of Georgia, and individual Counties, to customize lessons, delivery methods, and materials to meet all of your needs.

KNOWiNK

KNOWiNK will provide the State with a variety of training materials for EPoll including step by step user guides and checklists, videos, a Powerpoint created specifically for the State, and additional supplemental tools utilized for training; and, will at minimum, contain training related to all of the above requirements. Sample documentation provided to a county customer who also uses Dominion Voting systems is attached in Section 18.

Section 11 – Ballot Building Support

File 11-1 Ballot Building

11.1 State Level Support - Describe your ability to build ballots for all federal, state, county, and municipal (if executed on the proposed SVS) elections through June 30, 2021.

Dominion understands the GASOS will be performing all coding, ballot prep, and ballot testing on behalf of the counties. Dominion has included coding for all elections through the 2020 November Election in our plan. This method will allow the State's staff to become comfortable with the Democracy Suite of products so that in January 2021 and thereafter Dominion's support may be remote. The EMS system structure and functionality lends itself to a productive environment for the GASOS to accomplish ballot layout, proofing, and testing in a very efficient manner. The GASOS is being allotted all the equipment each county has to facilitate testing at the State level.

Section 11 – Ballot Building Support

File 11-2 SASOS Phone

11.2 State Level Support - After June 30, 2021, describe your ability to provide phone support to the GASOS until the end of the Contract, including 24/7 support on Election Day and normal GASOS business hours (8:00 AM to 5:30 PM) 45 days prior to each election.

Our initial plan is to work closely with the State so staff will become comfortable with the Democracy Suite of Products through the 2020 election cycle. During the 2021 election cycle, Dominion would look to provide remote support using a combination of local employees in our Atlanta based facility, and experts at regional and national facilities.

Below we provide our standard service availability, which will be customized based on discussion with Georgia during the initial phase-in meeting to ensure the needs of the State and counties are being met.

SERVICE AVAILABILITY AND RESPONSE

a. Standard hours of all support staff availability are from 8:00 a.m. to 5:30 p.m. EST, Monday to Friday excluding public holidays.

b. Support staff is available outside standard hours by mutual agreement of the parties. The County will be given the mobile phone numbers of all members of the implementation team.

Phase	Type of Support	Initial Response	Estimation Response	Resolution
Outside an Election period	On-site, telephone, and video	Up to one business day	Up to 2 business days	Up to 10 to 15 business days

During creation of the Election database and ballots	On-site and telephone	Up to next business day	Up to 2 business days	Up to 3 business days
From ballot mailing to Election Day	On-site and telephone	Up to 12 hours	Up to next business day	Up to 2 business days
On Election Day	On-site	Immediate	60 minutes	Within 1 hour
From Election Day until Election certification	Telephone and video	Up to 12 hours.	Up to next business day	Up to 2 business days
During a recount	If required, on-site	Up to 6 hours	Up to next business day	Up to 1 business day

Section 11 – Ballot Building Support

File 11-3 County Support

11.3 County Level Support -Describe your ability to provide voluntary, county-requested on-site support to county election offices in the general use of the proposed EMS when loading a prepared election dataset, creating and uploading necessary election media, and generating pre and post-election reports through December 31, 2020.

The Dominion project team will develop a customized support plan that meets the needs of the GASOS and counties for the November 2019 Pilot elections through the 2020 election cycle. This plan will include technical support for GASOS and counties on election night including the day before to the day after the election. The support plan will define the number of Dominion staff required in the field on election day as well. Dominion's on-site support resources have the necessary skills to assist the State to ensure the polling location opens in a timely fashion and that the equipment functions properly. In addition, a key role for the on-site support resource is to assist the State and counties with polling place closing, tabulation and results reporting. Dominion's active voting support strategy will be customized to meet the State's and counties specific needs.

We have accounted for County Technicians to be assigned to each county. We intend to train the county staff on a number of operational items including loading the election data onto the voting system devices, how to upload results, print reports and export the unofficial results to the State's ENR system,

In addition, Dominion will provide remote support through out the contracting period to assist counties with their questions and concerns.

Section 11 – Ballot Building Support

File 11-4 County Support

11.4 County Level Support - Describe your ability to provide phone support to county election offices in the general use of the proposed EMS when loading a prepared election dataset, creating and uploading necessary election media, and generating pre-election and post-election reports through December 31, 2021.

County support will draw from a pool of talent based in our Atlanta facility for support following the 2021 election cycle. At this point in the contract, Dominion will have established solid working relationships with each county and have a firm grasp on the abilities, strengths and pain points in the election process. With ongoing training at the County level, we will seek to further customize the focus lessons to address any recurring trouble, while keeping an eye on new personnel to ensure they have a firm grasp of the processes and procedures leading up to an election.

Additionally, we will utilize a similar service model and availability schedule as is used at the state level. Again, we would look to customize our approach based on discussions with Georgia during the initial phase-in meeting to ensure the needs of the State and counties are being met.

SERVICE AVAILABILITY AND RESPONSE

a. Standard hours of all support staff availability are from 8:00 a.m. to 5:30 p.m. EST, Monday to Friday excluding public holidays.

b. Support staff is available outside standard hours by mutual agreement of the parties. The County will be given the mobile phone numbers of all members of the implementation team.

Phase	Type of Support	Initial Response	Estimation Response	Resolution

Outside an Election period	On-site, telephone, and video	Up to one business day	Up to 2 business days	Up to 10 to 15 business days
During creation of the Election database and ballots	On-site and telephone	Up to next business day	Up to 2 business days	Up to 3 business days
From ballot mailing to Election Day	On-site and telephone	Up to 12 hours	Up to next business day	Up to 2 business days
On Election Day	On-site	Immediate	60 minutes	Within 1 hour
From Election Day until Election certification	Telephone and video	Up to 12 hours.	Up to next business day	Up to 2 business days
During a recount	If required, on-site	Up to 6 hours	Up to next business day	Up to 1 business day

Section 12 – Project Management and Program Support

File 12-1 PM Plan

12.1 Provide detailed organizational charts, project management methodology, named resources, use of external resources, and work history of projects completed using those resources.

Dominion

Dominion Voting: A true partner in the Georgia Election Community

The Power of Partnership

Thank you for the opportunity to present our response to RFX 47800-SOS0000037. Dominion is honored to be considered by you for a partnership that will shape the election environment in Georgia (the State) for years to come.

12.1 PM Plan Overview

The Dominion repsonse to question 12.1 covers the following topics:

- Implementation and Project Management Overview
  - Acceptance Testing
  - Suggestion for GASOS Consideration
  - Statewide Distribution of Products
  - Training Overview
  - Media, Communication and Voter Outreach Program
  - Election Programming
  - Election Support
  - Help Desk
  - Issue Management
- Implemenation Plan Milestones
- Key Personnel
- Our Subcontractor/Partners

Elections are Dominion's core business, and as such, the strategic direction of our business is focused on these core values: product innovation and exemplary customer service.

We believe these values and our long record of successful partnerships with election officials across the country make us the partner of choice for the Georgia Secretary of State's (GASOS) office and its 159 Counties.

We are proud of our voting system products and believe they are the most reliable, innovative, and secure solutions available in the industry. We have more than 1,500 partnerships across the country, comprised of various sized jurisdictions in rural and urban areas. Our continued commitment to these election officials has allowed us to successfully expand our footprint in every part of the country.

Dominion understands that the selection of a voting solution is one of critical importance, not only for today but for years o come. We recognize you are not just buying voting machines, but are entering into a long-term relationship with a technology partner - Election laws will change, Technology innovations will occur. It is our sincere hope that we will have the chance to become your partner; always adapting to meet the challenges of today and the opportunities of tomorrow.

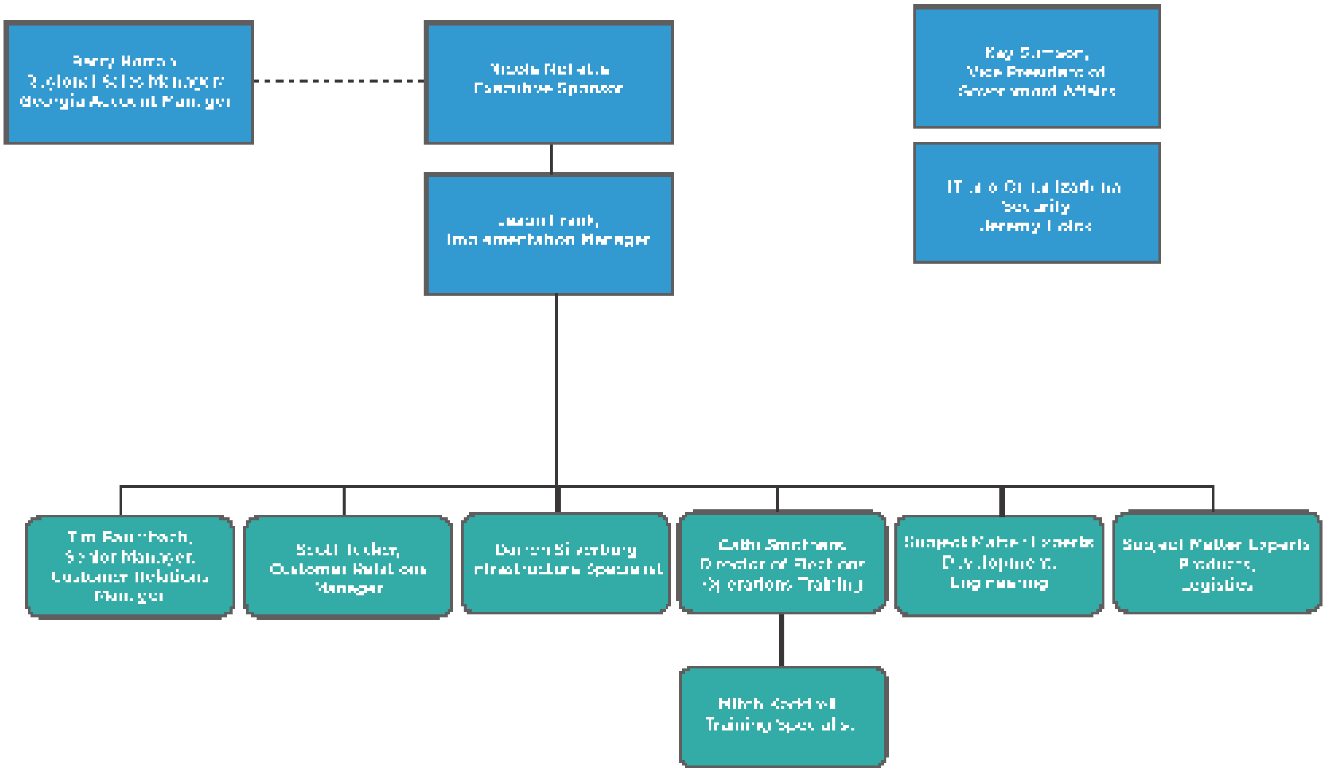
The plan below is a concerted effort to explain why Dominion is capable of being an outstanding partner for years to come, but also to illustrate we know how to implement a voting system as complex and large in scope as the challenge before both the State and Dominion.

Dominion is a company composed of election professionals that have gained extensive knowledge through many years of experience in the field. In fact, we have employees in leadership who were on the ground, responsible for the successful roll out of the State's existing voting system in 2002. Many other employees have successfully implemented large systems worldwide and across the United States. Dominion is able and willing to stand with Georgia in every aspect of the system's integrity and performance.

A partial list of the experienced Dominion Implementation Team is as follows:

- **Executive Sponsor:** Nicole Nollette, Executive Vice President of Operations
- **Account Manager:** Barry Herron, Regional Sales Manager, Georgia Account Manager
- **State Project Manager:** Jason Frank, Senior Manager, Implementations
- **Operations Project Manager:** Scott Tucker, Customer Relations Manager
- **Implementation Manager:** Tim Baumbach, Senior Manager, Customer Relations Manager
- **Infrastructure Specialist:** Darren Silverburg
- **Infrastructure Specialist & Training Specialist:** Cathi Smothers, Director, Election Operations
- **Training Specialist:** Mitch Keddrell:
- **IT & Organizational Security**: Jeremy Holck
- **VP, Governmental Affairs:** Kay Stimson

An Organization chart detailing the reporting structure is provided below:



These individuals will provide direction and management of all of the major tasks to be addressed in the roll out and overall Implementation Plan. All sensitive voting system data, processes, intellectual property and highly confidential items will be under the duties these individuals manage to.

Our team includes Barry Herron, who led and directed the successful rollout and implementation of the Diebold voting system in Georgia in 2002. His experience with that project would provide invaluable insight and expertise for the upcoming process associated with this new system. Along with Barry Herron, Cathi Smothers played an instrumental role in the successful implementation and support of Georgia’s current voting system in 2002 and will play a significant role in the new system implementation should Dominion be selected as the partner of choice.

All of the subcontractors will be trained by Dominion experts in the respective category of the project these contractors will be assigned to. A subcontractor must pass the training curriculum performance standards to be permitted to participate in the project. It is anticipated that in excess of 350 election management and support personnel will play roles in the roll out of the new system ranging from general warehouse workers, delivery truck drivers, testers to Certified Project Managers.

The project is similar in terms of tasks to be performed as with the system deployment in 2002. The major differences and the reason the number of staff personnel is reduced from approximately 550 to 350 is due to the fact the state has a statewide management infrastructure in place and the counties are used to a statewide touch screen type voter experience. In 2002, the State had a multitude of different voting systems in place including hand marked paper ballots, punch card systems, early optical scan systems, lever machines and direct-recording electronics (DRE's). Everyone from the state to the counties had to be trained on a new way of voting and managing the process.

The Dominion Implementation Plan takes into consideration physical security as well cyber security threats, integrity of data, accuracy of results, and the extreme importance of training for the state and the County employees and poll workers. Of course, our collective focus is always on the Georgia voter.

The State has the total commitment of Dominion's management team, our employees, our partners and our subcontractors. Dominion knows that the State must be successful in the implementation and execution of all local, state, and federal elections in the 2020 election cycle. Our plan and detailed methodology reflect our attention to detail and acknowledgment that there is no room for error.

Dominion will occupy and operate a launch and support facility in the Atlanta Metro area, conveniently located to the new GASOS facility on Interstate North Parkway in the I-75 Corridor. Our facility will house the inventory of equipment and software which will permit Acceptance Testing to be performed in an efficient and timely manner. Dominion intends to establish an internal Depot Repair department to immediately address any issues during Acceptance Testing and to address issues that arise during the initial warranty period. The facility will provide space to house the Project team members, product specialists and subcontractor partners in this effort.

Equipment required for the November Pilot election will be in the launch and support facility in late July ready for Acceptance Testing prior to being delivered to the participating pilot counties in Phase 1. Beginning in August, we intend to receive voting system equipment and components monthly through November 30, 2019. By receiving items monthly, we and the GASOS will be able to stay abreast of Acceptance Testing rather than waiting until after the November Election is complete to begin. We intend to begin distribution to the remaining counties immediately after the November 2019 election.

The Dominion delivery schedule will follow the quantities as defined in *Attachment O. Phase 2 – Part 1*, but will be able to deliver ahead of schedule if permitted by the GASOS. Completion of Phase 2 – Part 2 will be scheduled for completion by December 31, 2019, if not earlier. This will allow us to remain ahead of the schedule described in the RFP thus avoiding undue pressure on the State or the Counties as we prepare in January to conduct training across the State. We will begin training and preparing election databases training county staff and poll workers in a systematic and timely manner for the March 2020 Presidential Preference Primary.

Our subcontractor/partners will be Diversified Technologies (DT), KNOWiNK, and EasyVote. DT and EasyVote are Georgia-based companies. KNOWiNK, the leader in deployment of e-Poll Books nationwide, is our Poll Book partner for Georgia. DT's ownership and management were involved in the 2002 roll out as a partner to Diebold Election Systems. EasyVote is a local company that currently serves over ninety 90 Georgia counties with software applications and their key Georgia staff is well known and trusted by all county election officials.

The roll out and implementation of the new e-Poll Books will be integrated with the roll out of the new voting system in terms of dates, staffing, training and Election Support. Combining, coordinating and managing the efforts of Dominion, DT, KNOWiNK, and EasyVote equates to Dominion having the most experienced and dedicated roll out team of any vendor competing for the honor to be selected by the GASOS.

Again, Dominion Voting will identify and make use of every advantage through experienced Georgia-based subcontractors and maintain a delivery schedule that keeps us ahead of schedule as we build towards a secure, accessible, and transparent voting process in the 2020 Presidential Preference Primary.

Implementation and Project Management Methodology

Dominion understands that voting system implementations are complex and challenging projects, that require rigorous planning and focused execution. Dominion has successfully completed similar implementations in jurisdictions across the country, including most recently statewide implementations in the State of Colorado and New Mexico, as well as counties in Pennsylvania, Ohio, Michigan, California, Nevada and Cook County, IL.

We will employ technical and project management experts who have demonstrated unmatched skill in understanding what resources are necessary to complete a major project seamlessly and on time. Dominion's professional support organization will provide the coordination and supervision of all activities required to transition the State of Georgia to their new Democracy suite voting system. Dominion's proposed Operations team for Georgia not only has considerable experience in providing ongoing support to election officials, but also in implementing new voting technology. As stated above, we have employees who were on the ground in Georgia during the 2002 successful implementation of the current system.

Dominion has designed our project plans based on the following:

- Dominion's project plans adhere to Project Manager Body of Knowledge (PMBOK) standards and practices.
- Plans are developed using MS (MICROSOFT) Project and will be monitored/reported using MS Project.
- Plans are designed with key milestones (clear tangible deliverables) that are designed to mitigate risk to the greatest extent possible.
- Tasks are focused on accomplishing specific objectives, and duration is listed in days (eight hours constitutes one day).
- The work breakdown structure is a logical progression of steps, activities, and subtasks that lead to tangible work products or deliverables.
- Our plans provide Georgia with visibility into the tasks and schedule.
- Our plans incorporate Dominion's prior experience in successfully implementing voting systems.
- Our plans are achievable and will be used to manage to specific deadlines.

Implementation Strategy

Dominion is offering the most comprehensive implementation plan for the State of Georgia based on our extensive experience in managing the implementation of major projects in other states and major election jurisdictions across the country. The implementation expertise resident within Dominion's staff is unparalleled in the industry as evidenced by major installations in states such as New Mexico and Louisiana; major jurisdictions such as Cook County, Illinois (Chicago); Wayne County, Michigan, (Detroit); Contra Costa County, California; Sacramento County, California; and others.

To ensure all the State’s needs are being fully considered and addressed, Dominion will customize implementation objectives, schedules, and timelines. Below we provide a general narrative describing the major milestones of the implementation, followed by a very comprehensive sample timeline, which we include as part of our response under the *Implementation Plan Milestones* header below, and also in File 12-3 PM Time.

Project Initiation and Kick-Off Meeting
The designated Project Manager and the Technical Lead will meet with their counter parts in the GASOS staff to discuss and finalize the following activities:

- Review project governance structure, project roles and responsibilities
- Project Management Artifacts Review
- Review and adjust the following with a view to finalize immediately following contract signing:
    - Project plan activities, schedule and milestones
    - Manufacturing and delivery schedules
    - Establish the infrastructure to receive and test equipment deliveries
    - Assign subject matter experts’ critical tasks
    - Develop logistics plan for distribution to the respective counties
    - Issue tracking and escalation plan
    - Risk mitigation plan
    - Communication plan
    - Conflict Resolution plan
    - Training plans finalization for the Secretary of State staff and counties
    - Review and adjust training sessions and schedules
    - Review architectural and technical specifications deliverables
    - Establish depot repair plan during warranty period
    - Involve Dominion’s IT and Organization Security Director at this stage of the project to insure all security risks are identified
    - Define the responsibilities of our staffing resource and implementation partners
    - Develop a plan to support the GASOS efforts and goals for Voter Outreach, Communication and Media Programs

Requirements Gathering, Gap Analysis and Application Configuration
A key phase in the initial stages of the project implementation will be a gap analysis performed by the Dominion team.

Through this thorough analysis, Dominion will identify if there are aspects of system functionality which need to be customized to meet the State’s statutory requirements. Dominion technology is used in dozens of states across the United States, each with its own set of and unique requirements. Below we describe the steps involved in customizing the system to the State’s environment. The technology we use in Georgia will be tailor-made for the unique challenges and aspects that a state-wide launch in 159 counties demands.

The Dominion Voting Democracy Suite Election Management System (EMS) is a highly configurable election system that can be adapted to meet the needs of any jurisdiction. Dominion will work closely with the GASOS to ensure that the system is deployed in a manner that meets all jurisdiction and State requirements. The following steps are typically anticipated:

Create Election Data Import Bridge

In this series of steps, Dominion works with the professionals responsible for the creation and maintenance of the voter registration database to create a bridge that allows the direct import of geopolitical data into the Democracy Suite EMS. This step dramatically increases the speed and accuracy of the creation of the election database within the Democracy Suite EMS. In this way, election divisions, contests, candidate names, propositions and other essential data need not be input twice, reducing the likelihood of user error.

Customization of Configurable Options

During this stage, the State will provide final input and approval on ballot layout, reports content, and the configuration of the options of the ImageCast voting terminals. This step takes place at the same time as the data import bridge is created and results data export file is created and provided to the IT system managers. Understanding the integration requirements for communicating with ENR, Voter Registration and the KNOWiNK Poll Pads Book system early is key.

Security Plan

Dominion will introduce enhanced physical and personnel security best practices, including on- premise employee credentialing, smart technology visitor management systems and access control, monitored public entrances and physical access controls and secure environment management and access controls.

Dominion plans to facilitate operations in Georgia via a fully functional state of the art multi-use facility in or near the Georgia Secretary of State facilities. The facility will comply with EAC security standards and recommendations in consideration of security industry best practices. Dominion Voting will also commit to a regular cadence of physical security assessments and facility red-drill access control testing, reporting and monitoring.

It is projected that the facility will be approximately 15,000 to 25,000 square feet of operational, testing, storage and supply chain management and security space housing approximately (30+ Full Time Dominion Employees (FTE's) and in excess of three hundred (300) locally recruited and hired engineers, IT professionals, certification specialists, sales and security staff.

The facility will adhere to Dominion Voting System's comprehensive security program and the latest personnel security standards both locally and nationally to include comprehensive background checks for all employee hires and extensive screenings for third party contractors and mandatory cybersecurity training and cyber hygiene protocols for all employees.

End-to-End Test
All Dominion systems are certified and tested to the highest standards. As a part of our internal quality assurance process, systems undergo a rigorous operational test prior to release to the customer. This end-to-end test simulates real-election conditions and utilizes Election Day configurations. An election database is created, ballots are produced and cast on the appropriate voting systems, polls are closed, results are transmitted to the Results Tally & Reporting application of the Election Management System, and reports are generated. The End-to-End testing data will be used to the extent the GASOS is comfortable with the results. Out of box testing criteria will be jointly established with the State.

Receipt of Voting System Components
Receipt of all equipment and system components will be conducted in a manner that allows the coordination of equipment, supplies and consumables to be shipped directly to the Dominion facility in the Metro Atlanta area. During this phase of the project, all the commercial off the shelf components used in our election system are purchased. Dominion will deliver all required equipment to Dominion's facility based on the timeline outlined in the project plan. The Dominion facility will serve as the platform for the receipt of and Acceptance Testing of all system components prior to delivery to the respective counties and

While it would be preferable for all parties to identify final quantities of all supplies and consumables required on the initial contract, provision in the project plan has been made to allow incremental orders to be placed following change management processes.

Acceptance Testing

The GASOS is ultimately responsible for User Acceptance Testing. Dominion will provide on-site supervision and guidance to support acceptance testing performed and is allocating up to 19 testers to assist the state's staff. Acceptance testing involves a visual inspection of the voting platforms, successfully completing a series of internal diagnostics, and successfully tabulating ballots from a sample test election. Dominion provides documentation and training as well as warehouse set-up guidelines for inbound acceptance testing. In fact, Acceptance testing routines become an integral part of the system introduction and training of operational features of the system. It is a great learning experience for the State's staff assigned to this function. Acceptance testing will begin in earnest in late July with the receipt of the system components to fulfill the requirements for the counties selected to be pilot counties in November 2019 election. The smaller quantities will allow development of receipt and testing processes and procedures to be applied as the remaining equipment and software components are received over the months of August through December.

Acceptance Testing of Voting System and Software

Dominion will configure, install and test all equipment and software including the operating system and application software in a very secure and controlled manner. These items include:

- ImageCast X BMD and ICP Voting Terminals - System Acceptance Testing:
  - Physical inspection of equipment
  - Functional testing using provided test materials and documentation.
- ImageCast Central – System Acceptance Testing: G1130 and M160ii Models
  - Physical inspection of equipment
  - Functional testing using provided test materials and documentation.

A list of all system components to be Acceptance Tested in addition to the above main systems:

- ICX Prime Voting Booths
- ICX Prime and BMD Carry Bags
- ICP Ballot Boxes
- UPS Devices
- Mobile Ballot Printing Systems (Optional)
- Report Printers
- EMS Servers
- Client Workstations
- Adjudication Workstations
- Democracy Suite Products – plus Adjudication, Test Deck, UOCAVA Modules

All Printers, card readers, cables , peripherals and other connectivity equipment will follow the same regime as noted above.

EMS Acceptance Testing: including plus Adjudication, Test Deck, UOCAVA Modules

- Utilization of the EMS system to restore or create a simple election project
- Creation of sample election files and ballots for in-person and ImageCast Central voting system
- Directly load sample results from voting terminals
- Create Election Results Reports

Suggestion for GASOS Consideration

Dominion recommends the GASOS consider registering the system components into an inventory management system at the time of Acceptance by recording the equipment serial numbers and identifying data as the systems are logistically segregated by County for distribution. Dominion is aware of the EAC’s concern for tracking of voting system components from a security perspective. If this suggestion is to be considered, Dominion could add that function to the testing and distribution assignment processes.

The EAC asks the following questions:

- Are voting equipment and ballots transported to polling places by county officials or poll workers?
- How and when are voting equipment and ballots transported to the polling places?
- If poll workers transport voting equipment and ballots, when do they receive the equipment and ballots? If poll workers receive the voting equipment and ballots significantly in advance of the election, how and where are the materials stored until the election?
- Are detailed logs kept of who takes custody of equipment and ballots and those person(s) contact information?
- How are voting equipment and ballots secured from tampering from the time they leave election office custody to the time they are delivered to the polling places?
- Are serial numbers or other secure, tamper-proof devices or seals placed on all ports where memory cards are inserted?

The EAC Suggests the following:

- The voting devices should be secured with tamper-proof numbered seals. Access to the voting devices' power control and election results storage media should be secured (controlled) within the voting device. The serial number of all seals should be recorded for verification during precinct setup.
- Voting equipment checklists and delivery sheets, including the serial number for each machine, protective counter numbers, and any tamper-evident seals and/or tamper resistant tape numbers should be recorded and confirmed by staff, by delivery staff, and again by the poll workers on Election morning.
- A barcoding system should be explored as a method for tracking the location of voting system equipment. All electronic media, regardless of type (memory packs, compact flash cards, PCMCIA (Personal Computer Memory Card International Association) cards, voter card encoders, supervisor cards, and key cards) should be permanently identified with a unique serial number. The serial numbers should be recorded as part of the internal inventory audit trail.

Distribution of all voting system products to the respective Counties

Immediately following the completion of the November 2019 election, the physical delivery to the counties will begin for all items that have completed the State's acceptance testing procedures. Based on the monthly Acceptance testing methodology, counties will be identified by region to receive their new systems while following the State's defined schedules and quantities. The logistical nature of the plan will be formulated to address the capabilities of the counties to receive products. Perhaps some counties will be ready to receive the quantities included on Phase 2 – Part 1, and Phase 2 – Part 2, combined.

Decommissioning of Existing Systems
Dominion has identified a decommissioning contractor that will remove the State's legacy equipment, prior to delivery of the new voting system components.

Training Overview

Training is one of the most, if not the most important aspect of the statewide installation of a new voting system. In that regard, Dominion will work closely with the GASOS to ensure that the training program for the Secretary of State staff, County Election staff and Poll Workers is customized to meet your specific needs. Dominion will prepare and provide all needed training material, which includes training manuals, quick reference guides, website instructional courses, and technical reference manuals when necessary. Training format, content and curriculum will be developed as part of the implementation meetings.

Materials will be provided before implementation for both hardware and software functions. In addition to formal training, our subject matter specialists will work to transfer the required knowledge and skills to relevant State staff, with the objective of ensuring that your staff is empowered to manage all aspects of the system's availability and functionality. Dominion takes pride in our ability to transfer to local officials the skills necessary to conduct even complex elections with autonomy.

Please refer to the Training sections for more details of the training approach, but simply stated, Dominion will provide training for the GASOS Staff at the Dominion facility ahead of conducting training at the county level. In this manner, the GASOS will have the opportunity to assist Dominion in customizing and structing the training topics, methods and curriculums to be used. Special training sessions will be organized to address the needs of the pilot counties in September and October. These sessions will be repeated for all other counties in late 2019 or January 2020.

Poll Worker Training
Past implementations have proven that it is very important for all poll workers to have a chance to operate the machines "hands-on" in class, or at least participate in small groups and review. This allows poll workers to operate equipment while others observe and ask questions. Dominion will assist the State in integrating the new voting system training into its current poll worker training program's content and format, as well as in the development of training materials, and providing "train the trainers" courses. The goal is to assist in training poll workers to comfortably and confidently operate voting machines and readily provide voters with simple instructions and assistance in voting on them. Class size and scheduling are vitally important to the successful retainage of the aspects of operating a new voting system. Dominion will structure and customize the best overall training plan to accomplish the expected results of the GASOS and counties.

Sample Training Curriculums

Our standard course offerings include the full range of Democracy Suite classes. These will serve as a basis for the State of Georgia Training agendas and curriculums.

ImageCast X and ImageCast ICP Training

- This course introduces the Dominion Voting ImageCast X Prime (ICX) and ImageCast Precinct (ICP), used for in- person and accessible voting. Topics include:
- Setup of equipment
- Security, including safeguards to prevent and detect tampering
- Opening polls
- Processing ballots
- Addressing anomalies
- Accessible voting
- Closing polls
- Acceptance testing
- Troubleshooting – Identifying and resolving basic problems (issues that do not require a service call)
- Performing Logic and Accuracy testing

ImageCast Central Training

This course introduces the ImageCast Central (ICC). Topics include:

- Setup of the equipment
- Security, including safeguards to prevent and detect tampering
- Processing and scanning ballots
- Adjudicating ballots that may require review
- Processing write-in votes
- Closing
- Troubleshooting – Identifying and resolving basic problems (issues that do not require a service call)
- Performing Logic and Accuracy testing

Democracy Suite EMS Training - At the State Level

This course introduces election programming and results accumulation and reporting in Democracy Suite EMS. Topics include:

- System Security
- Importing, Creating and editing geopolitical data
- Importing, Creating and editing offices and contests
- Adding choices
- Creating and editing ballot layout

- Programming the ImageCast ICX Prime BMD, ImageCast Precinct ICP and the ImageCast Central
- Democracy Suite, Ballot Creation, Absentee ballots, Adjudication, Auditing, UOCAVA, Provisional Ballots
- Creating audio files for accessible voting
- Records preservation
- Tabulating and consolidating results
- Election night reporting (Results Tally and Reporting, including customizing and printing reports)
- Checks and balances – methods for ensuring the accuracy of precinct results
- Full understanding of audit procedures
- Any special requirements related to conducting a recount
- Post- Election Audit tools and features

Democracy Suite EMS Training - At the County Level
(Will occur at Regional Training sites plus on-site in the County)
This course introduces the end user to loading and testing the voting devices, Logic and Accuracy testing and results accumulation and reporting process. Topics include:

- Election media creation
- Loading devices
- Logic and Accuracy testing
- Election Day issues resolution
- Reporting and tabulation procedures.
- Election night reporting (Results Tally and Reporting, including customizing and printing reports)
- Any special requirements related to conducting a recount

Please note county level training will be conducted within the 14 GEOA regional sites. The regional in person training model is described in our Training Focus and Approach document. The regional method will be the most effective as class size and separation of curriculum lends itself to higher retention of information. A major issue to address is the make-up and refresher training classes that will be needed as not all attendees will be able to attend their assigned class. Additional classes may need to be scheduled. Classes can be scheduled on-site at the county; classes can be held at different sites or over the web; or on-line tutorials are always available at any time for any reason. Training is an area of utmost concern and Dominion will make sure everyone is trained and trained well.

Media, Communication and Voter Outreach Program

Dominion will work with the GASOS office to develop a comprehensive set of recommendations on communications and public outreach strategies to inform and educate key stakeholder perspectives on the new statewide voting system, as well as build overall public support and understanding of the state's rollout and implementation.

While the GASOS has full oversight for this process, as well as highly-seasoned professionals to lead this work, Dominion will be a full partner in efforts to prepare Georgia voters, the media and citizens at large as the 2020 PPP approaches. Dominion will provide proactive communications and outreach assistance throughout the implementation period.

When Georgia House Bill (HB) 316 was debated in committee meetings in the House and the Senate earlier this year, Secretary Raffensperger's consistent position on the benefits of ballot marking devices, and concise talking points on voting list maintenance and early voting procedures, were key to the smooth passage of the bill through the General Assembly. The same approach should be replicated during the implementation of the new voting system.

County election officials, in particular, are vital to outreach efforts. They have the most direct impact and interaction with voters. They will be looking to the State for tools to educate and ensure confidence in the new system. Briefing materials, FAQs, infographics, videos, and public demo days are all resources in a comprehensive public outreach portfolio that Dominion can work with the State to develop.

In addition, Dominion Voting Systems is prepared to work with the state on a communications and media plan that will include, at a minimum:

- Earned Media
- Paid Media
- Digital/Web Content
- Direct Outreach

This plan will include a concise set of core messages and a direct presentation to help deliver what is essential information on the state's new voting system. Where appropriate, production of materials in multilingual/accessible formats and multilingual/accessible community outreach activities will be incorporated into the plan.

A brief sample timeline:

- **August 1, 2019:** Comprehensive resource kit delivered to 159 county election officials.
  - Assistance with drafting op-eds and digital content for local media.
- **August 15, 2019:** Roll-out of social media program targeted towards voters and civic organizations.
  - Focus on counties in the pilot program.
- **November 12, 2019:** Roll-out of earned media blitz on the success of the pilot program.
  - Identify key county election officials who can serve as "ambassadors" for the new system and processes.

- **January 6, 2020:** Updated resource kit delivered to 159 county election officials that reflects successes and ways to address any challenges from the pilot program.
- **January 20, 2020:** Roll-out of social media program focused on the beginning of in-person early voting on February 10 (projected).
- **February 3, 2020:** Roll-out of earned media program focused on 4-6 county election officials who can speak to the success of the November 2019 pilot program.
- **February 24, 2020:** Earned media blitz on what to expect at the polling place for the March 3 (projected) PPP voter.
- **February 24-March 16, 2020:** Earned media statewide tour with Secretary Raffensperger and local election officials on what to expect/followed by success of the new system in the 2020 PPP.

During both the creation and rollout of the public outreach plan, Dominion will leverage the experience and insight of our Vice President of Government Affairs, Kay Stimson. Kay brings more than two decades of professional media expertise in the voting space to customers. She served as the communications director for the National Association of Secretaries of State immediately prior to joining Dominion and has worked closely with the Elections Assistance Commission, the Department of Homeland Security and election officials from across the nation. Prior to Kay's jump into elections, she was a morning anchor and state government reporter for a network affiliated television station in Greenville, South Carolina.

Election Programming

Dominion understands the GASOS will be performing all coding, ballot prep, and testing on behalf of the counties. Dominion has included coding for all elections through the 2020 November Election in our plan. This method will allow the State's staff to become comfortable with the Democracy Suite of Products, so that in January 2021 and thereafter, Dominion's support can be provided on a remote basis. The EMS system structure and functionality lends itself to a productive environment for the GASOS and counties to accomplish ballot layout, proofing, and testing in a very efficient manner.

The creation of the election database is a critical step in the election implementation. Given the very limited time available between the certification of the final ballot and the distribution of UOCAVA / Mail ballots, it is very important that timelines are appropriately managed. Dominion employs an interactive approach to ballot and report creation, where successive rounds of proofs are provided to election officials as more information becomes available. Using this approach, in many cases ballots have already been approved by the time they are certified, maximizing the time available for pre-election testing and logistics.

The following are the basic steps involved in election programming:

- **Final election data provided to programming team** – Final election data is provided to the programming team. This should be provided as soon as possible.
- **Election Programming Quality Assurance** – On completion of election programming, a back-up of the final data structure is transferred to the Dominion Team for verification and testing. The purpose of this test is to ensure that no unintended errors have impacted the data structure.
- **Test decks generated** – On completion of programming quality assurance, the test decks are created for use in Logic and Accuracy testing.
- **Ballots and ballot audio generated and approved -** On completion of programming quality assurance, ballots (including audio and paper ballots) are generated. Ballot proofs and electronic ballot image files are generated and provided to State Officials. State Officials carefully review each ballot. When State officials are satisfied that the ballots are correct, they initial each ballot, and when they are satisfied that all ballots are correct, they sign-off on their accuracy, and the election database and image files are provided to the counties.
- **Ballot printing and distribution** – Ballot printing and distribution are the responsibility of the printer and the State of Georgia Officials. Dominion will provide a recommended ballot inspection process that should be followed to ensure that all ballots produced are of sufficient quality. The same quality assurance process will be applied regardless of the counties use a commercial printer or print absentee and extra ballots on their Remote Ballot Printing system printers.
- **Memory Media Programming** – Memory media for the ImageCast X, ImageCast ICP and ImageCast Central devices is programmed and sent to the counties for downloading to the voting devices.
- **Receive test ballots** – Some counties may print their own test ballots inhouse and others may hire commercial ballot printers. The receipt of test ballots is the milestone that triggers the beginning of Logic & Accuracy testing.

Logic and Accuracy Testing

Georgia State and County officials and their staff will conduct logic and accuracy testing of voting equipment, using processes, procedures, and support provided by Dominion. The Dominion project team will provide supervision and support for the initial elections and then be available throughout the future L&A process to assist the State on an as required basis. Training will be provided for State officials and for each county. Each County will be assigned an on-site county technician that will be in support of the county each election in 2019 and 2020 to include L&A and other preparation procedures leading up to an election.

Election Support

The Dominion project team will develop a customized support plan that meets the needs of the GASOS and counties for the November 2019 Pilot elections through the 2020 election cycle. This plan will include technical support for GASOS and counties on election night including the day before to the day after the election. The support plan will define the number of Dominion staff required in the field on election day as well. Dominion's on-site support resources have the necessary skills to assist the State to ensure the polling location opens in a timely fashion and that the equipment functions properly. In addition, a key role for the on-site support resource is to assist the State and counties with polling place closing, tabulation and results reporting. Dominion's active voting support strategy will be customized to meet the State's and counties specific needs.

Help Desk

- **Tier 1** – Tier 1 is the Dominion staffed helpdesk located within the Dominion facility. The help desk will receive all incoming calls related to the voting systems and software. The help desk technicians will resolve issues as they come in and track all issues in a Ticket Tracking System. In the instance a help desk technician is unable to resolve an issue; the issue is then escalated to Tier 2. In addition, the KNOWiNK Poll Pad has features which can be used to communicate questions and issues to election central operation in the Dominion facility.

- **Tier 2** – Tier 2 are Dominion's Product Specialists. All of Dominion Product Specialists are trained, experienced and well equipped to handle all types of support issues. Their responsibility is to respond to all incoming requests from the Tier 1. Help Desk staff. In the instance Dominion's Product Specialist is unable to resolve an issue; the issue is then escalated to Tier 3.

- **Tier 3** – Tier 3 is Dominion's facility Supervisor who will be task to manage tickets that are received from Dominion's Product Specialists (Tier 2). Tier 3. Will be responsible for resolving issues and if required approving a tabulator or BMD device replacement. This decision will involve coordination with the Election Day Rovers in the field which will have spare devices for this purpose. The process ensures that tabulators or BMD's are only being replaced on an as-needed basis. If a tabulator is approved for replacement, the ticket will be escalated to Tier 4. A swap out of a tabulator will only take place if the Dominion's Warehouse Supervisor has provided approval.'

- **Tier 4** – Tier 4 consists of Field Service Representatives (Election Day Rovers). Field Service Representatives will consist of Dominion staff, Dominion subcontractors and county personnel. Their responsibility is to deploy solutions instructed by Tier 3 (Dominion facility Supervisor). To ensure ongoing communication with required personnel, all field support will be equipped with a vehicle and a smart phone that includes access to text, calls and email. Responses to all requests are immediate with a target resolution time of within 1 hour.

Once a Field Service Representative arrives onsite at a poll, the representative will follow the following steps:

1. Ensure that the Voting equipment is in fact non-functional
2. Record the Serial Number of the non-performing equipment
3. Record the seals of the memory card ports
4. Break the seals of the memory card ports
5. Eject the Election Memory Cards
6. Swap unit with a functional unit
7. Insert the eject memory cards into the replacement unit
8. Seal memory card ports with new seals
9. Record the seals
10. Election Official powers on tabulator while the Field Service Representative remains onsite
11. Once, Field Service Representative ensures the replaced unit is working as expected; he/she informs Dominion's Product Supervisor that the unit has been successfully replaced.
12. Once the unit is released for quarantine, Dominion takes a look at the equipment replaced and creates a log

Post-Election Debrief Meeting

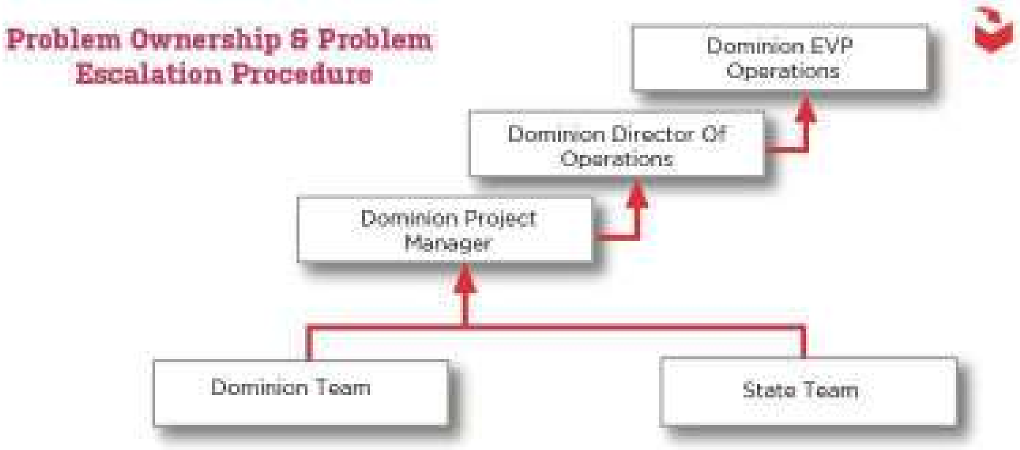
Within 30 days following election event, Dominion will coordinate a post-election debrief meeting to discuss post-election events and activities with the GASOS . The debrief meeting is an opportunity to review lessons learned from both Dominion and the State and Counties, evaluate success factors and areas for improvement for process enhancement in future elections. On completion of these reviews, project documentation and the Implementation Plan will be revised to reflect learning from the first election.

The draft Implementation Plan contained in this RFP response and milestone section, is based on our current understanding of project requirements from the RFP and draws on our extensive, real world implementation experience.

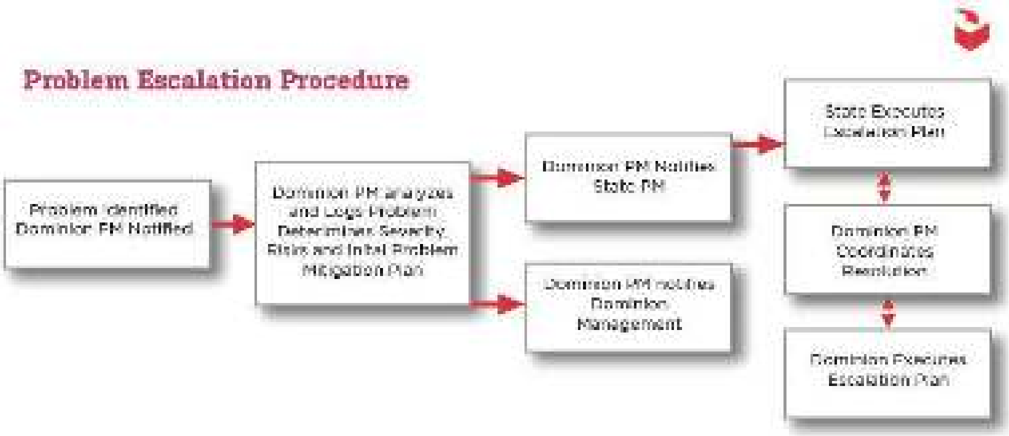
Dominion subscribes to a collaborative management approach, where transparency, frankness, and open communications drive our projects. The key aspects to effective management are planning and control processes. We have developed tried and true project plans, and we implement controls to maintain schedules and quality standards.

Issue Management Methodology

During the normal course of implementing Democracy Suite, Dominion staff work closely with the State to establish clear and timely information flow. This communication helps reduce the number of problems and support early identification of problems that require resolution through the Problem Escalation Procedure (PEP). Key to a successful PEP is ownership of a problem. The following table outlines the problem escalation path for the Dominion Team:


Problem Ownership & Problem Escalation Procedure
Dominion EVP Operations
Dominion Director Of Operations
Dominion Project Manager
Dominion Team
State Team

Another key to the Problem Escalation Procedure is process. The Dominion Project Manager will follow a well- defined and proven PEP process as depicted at a high level in the diagram below, Problem Escalation Procedure, and further detailed in this section.


Problem Escalation Procedure
Problem Identified Dominion PM Notified
Dominion PM analyzes and Logs Problem Determines Severity Risks and Initial Problem Mitigation Plan
Dominion PM Notifies State PM
Dominion PM notifies Dominion Management
State Executes Escalation Plan
Dominion PM Coordinates Resolution
Dominion Executes Escalation Plan

- **Problem Identification** – Customer identifies a problem or Dominion proactively identifies a problem
- **Problem Analysis** – The Dominion Project Manager will work with the individual that identified the problem and Dominion staff to clearly characterize the problem, assess its severity, and determine the initial mitigation strategy. The Dominion Project Manager will describe, document, and log the problem in Dominion's automated ticket tracking system. Dominion's Project Manager will notify appropriate Customer/Dominion staff of the severity and risk of the problem.
- **Problem Mitigation Plan (PMP)** – The Dominion Project Manager will lead a team to identify the root cause, determine/document mitigation approach, and identify the management point of contact for approval of the PMP.
- **Mitigation Execution** – The team will execute the approved PMP and track resolution.

- **Problem Escalation Process** – The Dominion Project Manager will escalate a problem based on exceeding the resolution target time or at her discretion.
- **Problem Close-out** – The Dominion Project Manager will document the problem, resolution, and lessons learned. The Dominion Project Manager will also close out the item on the problem and risk logs.

Since problems do not always occur during normal business hours, key stakeholders will be provided with emergency contact information that will allow our team to be reached outside of business hours (e.g., evenings, weekends, holidays, etc.) and on an emergency basis.

Dominion Voting Systems is built on supporting customers in conducting elections in an error-free, secure, and timely manner. The Dominion team designed our PEP to ensure that we address problems before they have an impact on an election. Higher-levels of service are provided during critical periods. Escalation always takes place to a position with a wider and deeper pool of resources at his/her disposal, to assist in resolution.

Risk Management

In addition to the project schedule, project risk management strategy and contingency planning is a critical component of the overall implementation plan. Best practice in risk management involves reducing the likelihood of occurrence of an undesired event and mitigating its effects once the event has occurred.

An early project activity is to work with stakeholders to understand potential risks and to put in place measures to reduce the probability and potential impact of these uncertain events. This activity includes a methodical process by which the project team identifies, scores, and ranks the various risks. High, medium, and low potential risks are identified, along with the action to be taken for each identified risk. This is to reduce the probability of a negative occurrence or reduce its impact on the project. A comprehensive, Georgia-specific risk management plan will be developed and finalized during the initial phases of the implementation.

A sample listing of risks is provided below:

Risk	Mitigation Strategies	
	Prevention	Recovery

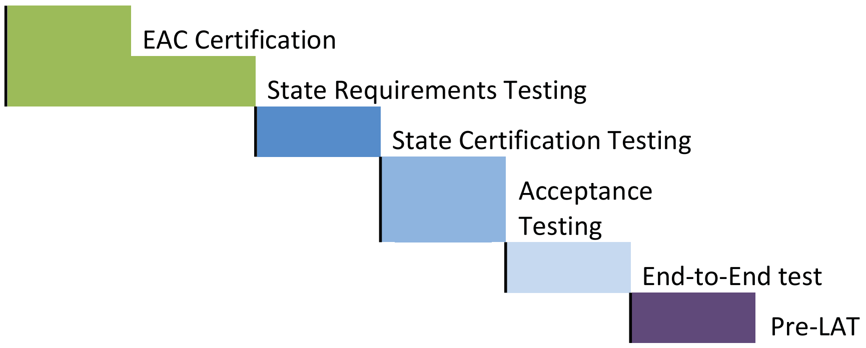
Election Management - Errors in programming that are not uncovered prior to ballot scanning	- Ballot proofing before ballots sent to printer - Comprehensive pre- election Logic and Accuracy testing of each voting machine using the Election Project database. Results reported by each voting machine are compared with a known result to ensure accuracy.	- Dominion technicians are available throughout the election period to respond to any unforeseen challenges that could arise
Election Reporting - Reports produced do not meet requirements	- The Dominion Voting project manager works closely with officials from the beginning of the project to ensure that report templates meet their needs - Reports are produced following the pre- election test, providing officials with the opportunity to see	- Dominion Voting's election management system provides a high degree of flexibility in the design of election reports. When called upon Dominion engineers can customize reports extremely quickly ensuring that all Georgia reporting requirements are met.

Quality Assurance

Dominion uses multi-level quality assurance and quality control processes to ensure that all elements of our integrated voting system perform properly with every use. Independent reviews of election databases are conducted prior to Logic & Accuracy testing. We recommend (and support our customers to conduct) precinct-level pre-election testing.

In addition to this rigorous testing and control program designed to catch errors, Dominion Voting regularly conducts process audits of our acceptance testing, and programming processes to ensure that errors never occur.

Testing Phase Summary



🟩 Development and Federal Verification
🟦 State Verification
🟪 Election Preparation

Dominion Voting tests its equipment to the highest standards in the industry. Our test plan is multi-layered and designed to complement State tests. Key attributes of the test plan are as follows:

1. **EAC Certification** – Dominion products are certified as EAC compliant. This is the highest certification standard in the industry and is your assurance that all products have undergone the highest level of testing.

2. **State Requirements Testing** – Dominion Engineers work to configure the EAC certified platform to meet the State of Georgia's specific certification requirements.

3. **State Certification Testing** – Dominion's team works with the Secretary of State's office to demonstrate compliance of the system with state requirements.

4. **Acceptance Testing** – Each component of the system is tested for functionality at the customer site. Dominion will provide training and documentation to officials to assist them in undertaking this task.

5. **End-to-End Test** – Dominion will work with the State to conduct end-to-end testing. We recommend that this test is completed following EMS training on a project reflecting Election Day requirements. In this test, an election project is created, and a representative sample of tabulators is programmed. Test ballots with known results are prepared and cast. Results are uploaded into the election management system and reports generated. The results are then compared to the expected outcomes to verify the system is performing properly. This test is performed on site at the customer warehouse.

6. **Pre-Election Logic and Accuracy Testing** – In advance of all elections, Dominion Voting recommends that Logic and Accuracy Testing of each voting system is tested with final Election Day ballots. This complete end-to-end test provides certainty that the system will perform as planned on Election Day. This test is performed on site at the customer warehouse.

7. **Automated Test Deck Creation** – The creation of automated, comprehensive test decks is an optional service provided by Dominion to assist customers in conducting Logic and Accuracy testing. Using the Election Day database, a series of pre-marked ballots are generated based on a computer algorithm designed to provide the highest assurance of system accuracy. When scanned

these decks create known outcomes that can be compared with tabulated results. The elimination of error due to mistakes in hand-marking provides more confidence in test results.

Change Control

Once the State approves the baseline plan, changes, if any, will follow a formal change control process, where Dominion's Project Manager will update the plan as required in consultation with counterparts from the State.

The following steps comprise Dominion's organization change control process for all projects and will be used for the implementation:

1. Identify the need for a change (Any stakeholder) – Requestor will submit a completed Dominion change request form the Project Manager.

2. Log the change in the change request register (Project Manager) – The Project Manager will maintain a log of all change requests for the duration of the project.

3. Conduct an evaluation of the change (Project Manager, Project Team, Requestor) – The Project Manager will conduct an evaluation of the impact of the change to cost, risk, schedule, and scope.

4. Submit a change request to Project Sponsor (Project Manager) – The Project Manager will submit the change request and analysis to the Sponsor for review.

5. Project Sponsor Decision – The Project Sponsor will evaluate and discuss the proposed change and decide whether it will be approved based on all submitted information.

6. Implement change (Project Manager) - If a change is approved by the Project Sponsor, the Project Manager will update and re-baseline project documentation as necessary as well as ensure any changes are communicated to the team.

Updates and Upgrades

Any software changes, upgrades, modifications, updates, patches, etc. are typically included in upcoming full releases of the software. The State will have ongoing visibility as to which future version of Democracy Suite will include any Georgia-specific upgrades or updates; Dominion will devise an upgrade plan as required with the State.

The proposed voting system is supported by Dominion for the duration of the agreement with the State or individual counties.

Dominion is constantly working with Commercial-off-the-Shelf equipment providers, such as Canon or Dell, to ensure visibility regarding End of Life components and available replacements. This is done in conjunction with managing ongoing state and federal certification campaigns, to ensure that Democracy Suite remains fully operational and available to customers. Wherever possible Dominion strives to integrate any new product offerings and enhancements to the currently certified system version to prevent having to replace certain infrastructure components. However, major upgrades often require the upgrade of Dell/Microsoft related equipment and software.

Dominion understands that election officials need to ensure that the significant investment required to upgrade a voting system is made with confidence and peace of mind that the technology will keep up with changing requirements and public expectations. Dominion's development team is continually working on refining existing products and functionality, leading to annual VVSG certification and/or VSTL Testing campaigns with the EAC, as well as state certifications as required.

Schedule Management

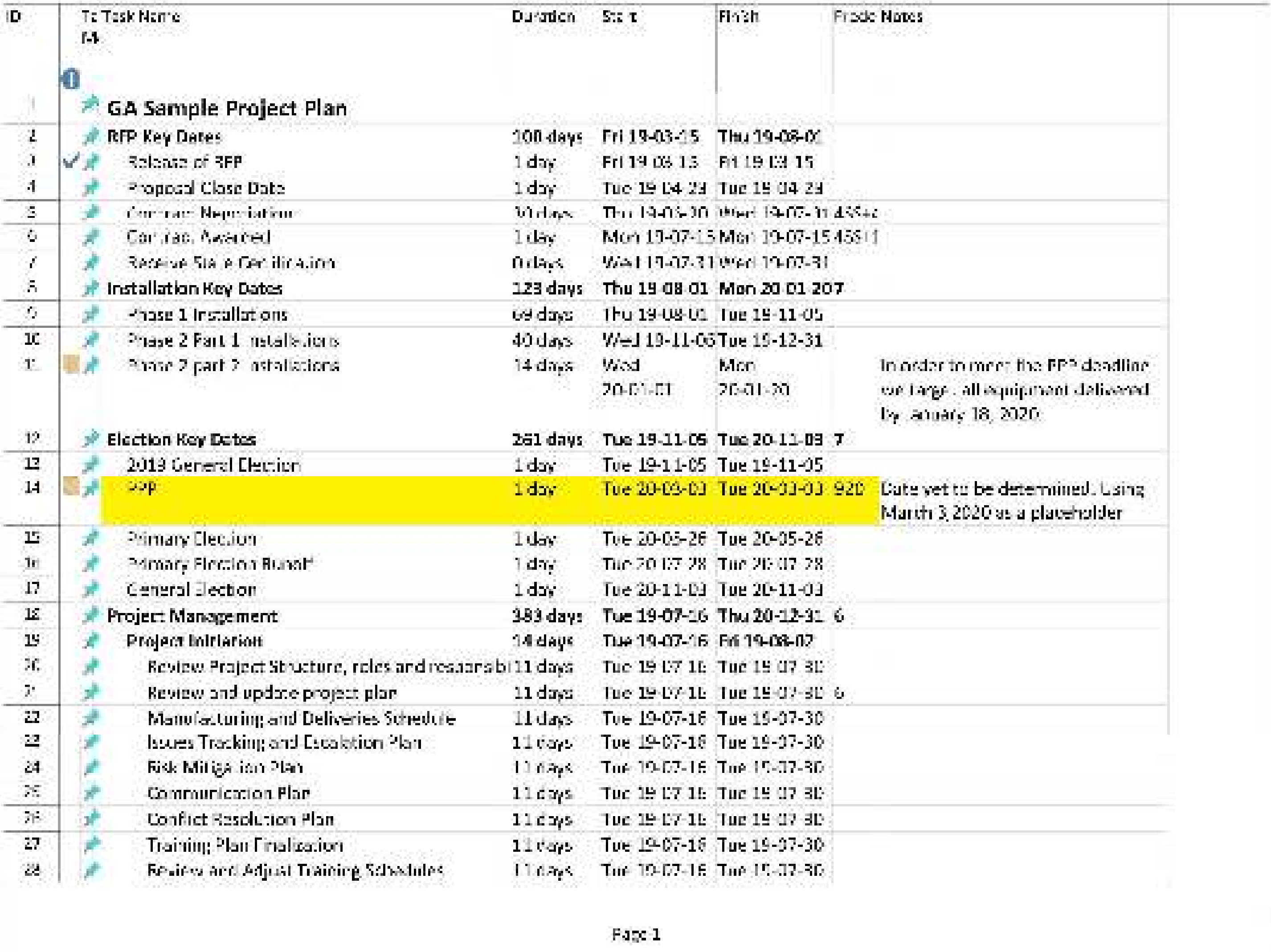
Dominion has provided a preliminary project plan (schedule) as part of this RFP. This proposed project plan and schedule will be adjusted in consultation with key stakeholders to establish the "baseline" plan during Project Kick-Off. The project plan will be reviewed by the project team and any resources assigned to project tasks. The project team and resources must agree to the proposed assignments, durations, and schedule.

One of the essential components of our project management approach is regularly scheduled meetings with all key stakeholders from both the Dominion and the State's project teams. Dominion agrees to host weekly meetings, which can be held in person or on the phone depending on the project phase, which would include, at minimum, Dominion's Project Manager, Technical Lead, and Executive Sponsor. These regular meetings are an opportunity to review progress against the baseline plan, and discuss any necessary changes, as well as address any other project issues or questions.

The weekly meetings are in addition to ongoing weekly communication between the Dominion Project Manager and counterparts in the State, as required by the RFP. The biweekly meetings bring together key decision makers and stakeholders to ensure adequate project oversight.

Implementation Plan with Milestones.

On the following pages, Dominion has provided our implementation plan with proposed milestones. Dominion will work with the State of Georgia to finalize and tailor this plan upon contract award.



ID		Task Name	Duration	Start	Finish	Prede	Notes
1		**GA Sample Project Plan**					
2		**RFP Key Dates**	100 days	Fri 19-03-15	Thu 19-08-01		
3	✓	Release of RFP	1 day	Fri 19-03-15	Fri 19-03-15		
4		Proposal Close Date	1 day	Tue 19-04-23	Tue 19-04-23		
5		Contract Negotiation	30 days	Thu 19-05-30	Wed 19-07-10	4SS+2	
6		Contract Awarded	1 day	Mon 19-07-15	Mon 19-07-15	4SS+1	
7		Receive State Certification	0 days	Wed 19-07-31	Wed 19-07-31		
8		**Installation Key Dates**	123 days	Thu 19-08-01	Mon 20-01-20	7	
9		Phase 1 Installations	69 days	Thu 19-08-01	Tue 19-11-05		
10		Phase 2 Part 1 Installations	40 days	Wed 19-11-06	Tue 19-12-31		
11	▨	Phase 2 part 2 Installations	14 days	Wed 20-01-01	Mon 20-01-20		In order to meet the RFP deadline we target all equipment delivered by January 18, 2020
12		**Election Key Dates**	261 days	Tue 19-11-05	Tue 20-11-03	7	
13		2019 General Election	1 day	Tue 19-11-05	Tue 19-11-05		
14	▨	PPP	1 day	Tue 20-03-03	Tue 20-03-03	920	Date yet to be determined. Using March 3, 2020 as a placeholder
15		Primary Election	1 day	Tue 20-05-26	Tue 20-05-26		
16		Primary Election Runoff	1 day	Tue 20-07-28	Tue 20-07-28		
17		General Election	1 day	Tue 20-11-03	Tue 20-11-03		
18		**Project Management**	383 days	Tue 19-07-16	Thu 20-12-31	6	
19		Project Initiation	14 days	Tue 19-07-16	Fri 19-08-02		
20		Review Project Structure, roles and responsibi	11 days	Tue 19-07-16	Tue 19-07-30		
21		Review and update project plan	11 days	Tue 19-07-16	Tue 19-07-30	6	
22		Manufacturing and Deliveries Schedule	11 days	Tue 19-07-16	Tue 19-07-30		
23		Issues Tracking and Escalation Plan	11 days	Tue 19-07-16	Tue 19-07-30		
24		Risk Mitigation Plan	11 days	Tue 19-07-16	Tue 19-07-30		
25		Communication Plan	11 days	Tue 19-07-16	Tue 19-07-30		
26		Conflict Resolution Plan	11 days	Tue 19-07-16	Tue 19-07-30		
27		Training Plan Finalization	11 days	Tue 19-07-16	Tue 19-07-30		
28		Review and Adjust Training Schedules	11 days	Tue 19-07-16	Tue 19-07-30		

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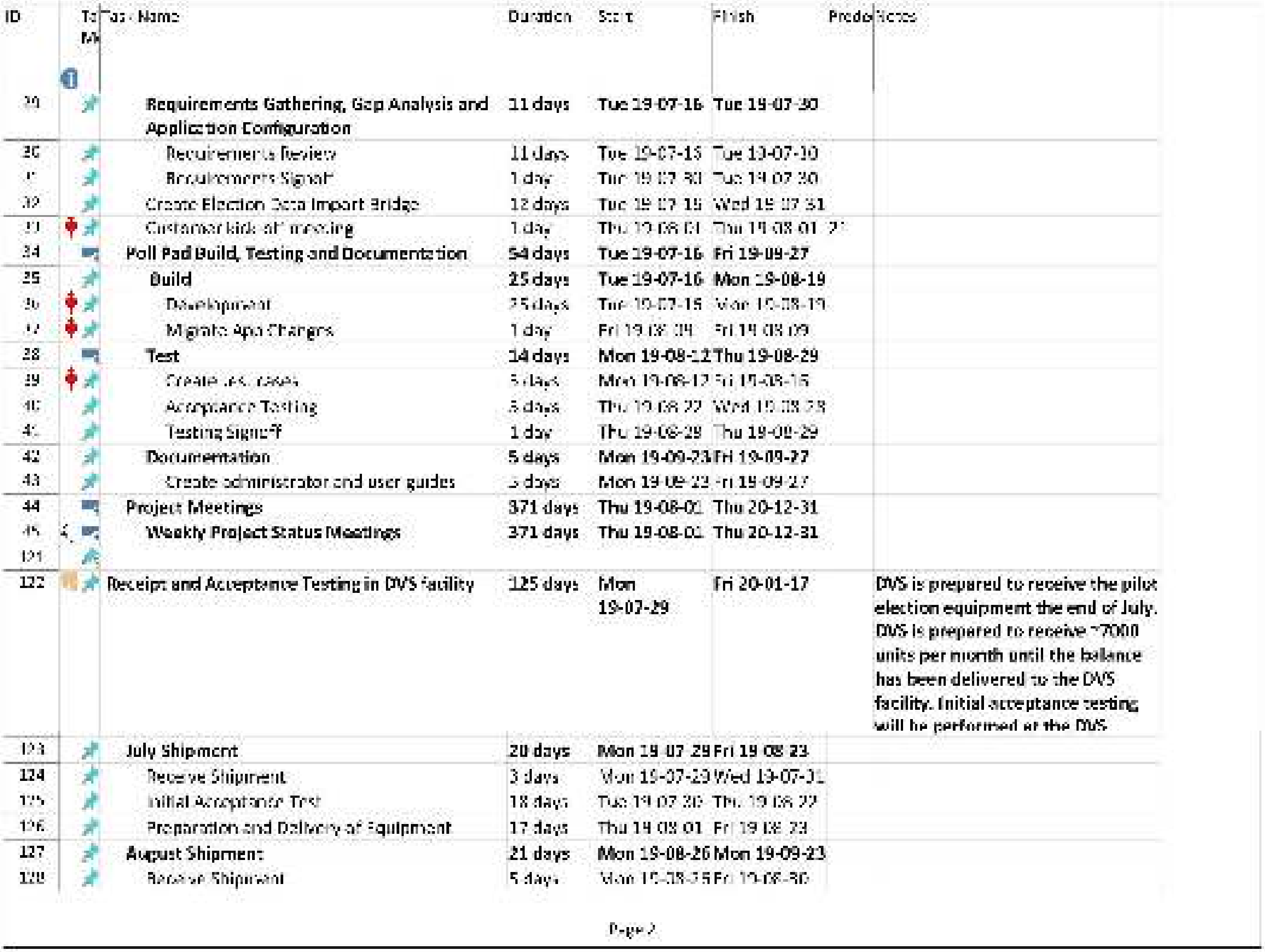

ID	Ta Mo	Task Name	Duration	Start	Finish	Prede	Notes
29		**Requirements Gathering, Gap Analysis and Application Configuration**	**11 days**	**Tue 19-07-16**	**Tue 19-07-30**		
30		Requirements Review	11 days	Tue 19-07-16	Tue 19-07-30		
31		Requirements Signoff	1 day	Tue 19-07-30	Tue 19-07-30		
32		Create Election Data Import Bridge	12 days	Tue 19-07-16	Wed 19-07-31		
33		Customer kick off meeting	1 day	Thu 19-08-01	Thu 19-08-01	27	
34		**Poll Pad Build, Testing and Documentation**	**54 days**	**Tue 19-07-16**	**Fri 19-09-27**		
35		**Build**	**25 days**	**Tue 19-07-16**	**Mon 19-08-19**		
36		Development	25 days	Tue 19-07-16	Mon 19-08-19		
37		Migrate App Changes	1 day	Fri 19-08-09	Fri 19-08-09		
38		**Test**	**14 days**	**Mon 19-08-12**	**Thu 19-08-29**		
39		Create test cases	5 days	Mon 19-08-12	Fri 19-08-16		
40		Acceptance Testing	5 days	Thu 19-08-22	Wed 19-08-28		
41		Testing Signoff	1 day	Thu 19-08-29	Thu 19-08-29		
42		**Documentation**	**5 days**	**Mon 19-09-23**	**Fri 19-09-27**		
43		Create administrator and user guides	5 days	Mon 19-09-23	Fri 19-09-27		
44		**Project Meetings**	**371 days**	**Thu 19-08-01**	**Thu 20-12-31**		
45		**Weekly Project Status Meetings**	**371 days**	**Thu 19-08-01**	**Thu 20-12-31**		
121							
122		Receipt and Acceptance Testing in DVS facility	125 days	Mon 19-07-29	Fri 20-01-17		DVS is prepared to receive the pilot election equipment the end of July. DVS is prepared to receive ~7000 units per month until the balance has been delivered to the DVS facility. Initial acceptance testing will be performed at the DVS
123		**July Shipment**	**20 days**	**Mon 19-07-29**	**Fri 19-08-23**		
124		Receive Shipment	3 days	Mon 19-07-29	Wed 19-07-31		
125		Initial Acceptance Test	18 days	Tue 19-07-30	Thu 19-08-22		
126		Preparation and Delivery of Equipment	17 days	Thu 19-08-01	Fri 19-08-23		
127		**August Shipment**	**21 days**	**Mon 19-08-26**	**Mon 19-09-23**		
128		Receive Shipment	5 days	Mon 19-08-26	Fri 19-08-30		

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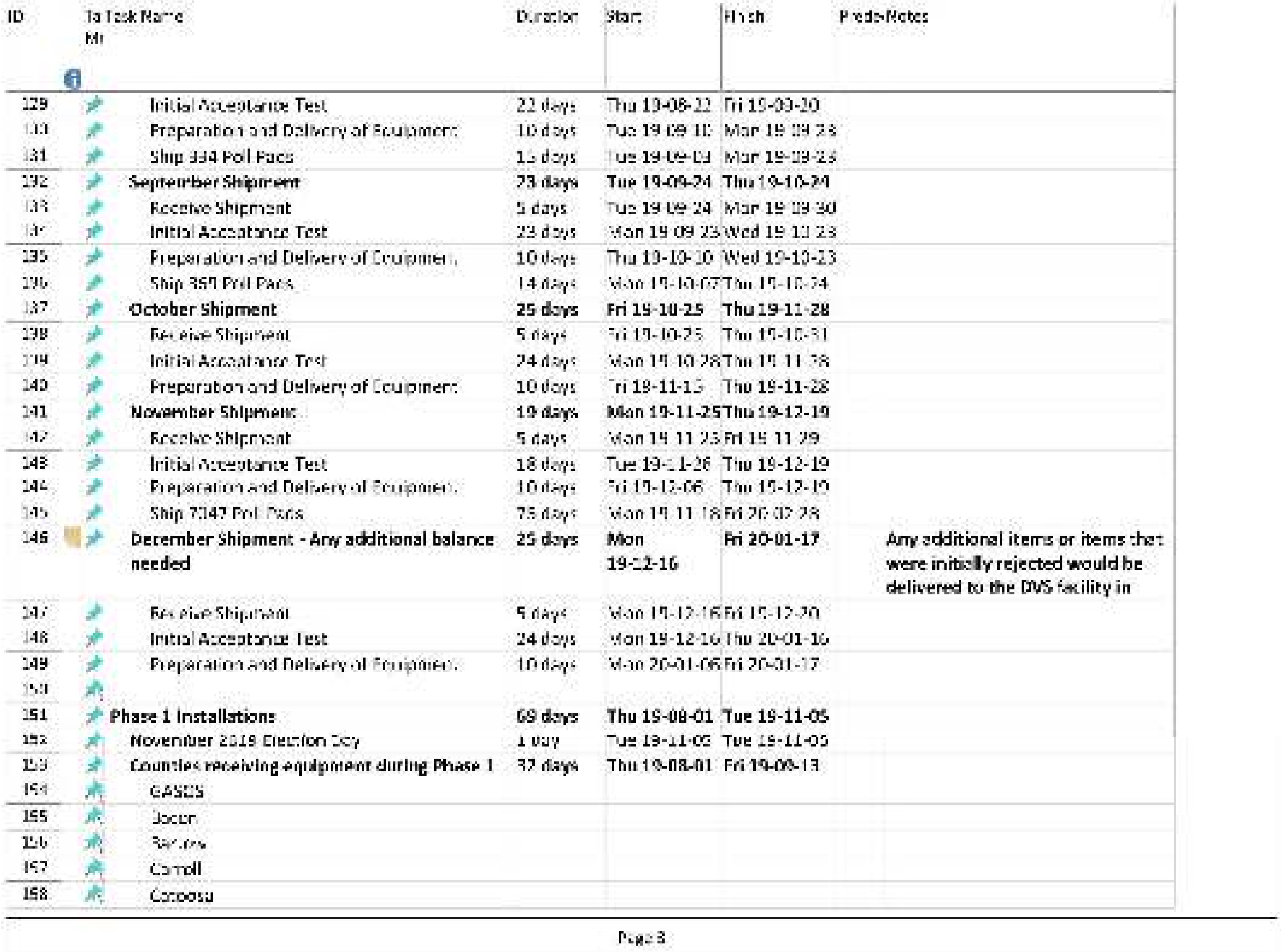

ID	Ta Mo	Task Name	Duration	Start	Finish	Prede	Notes
129		Initial Acceptance Test	22 days	Thu 19-08-22	Fri 19-09-20		
130		Preparation and Delivery of Equipment	10 days	Tue 19-09-10	Mon 19-09-23		
131		Ship 334 Poll Pads	15 days	Tue 19-09-03	Mon 19-09-23		
132		**September Shipment**	**23 days**	**Tue 19-09-24**	**Thu 19-10-24**		
133		Receive Shipment	5 days	Tue 19-09-24	Mon 19-09-30		
134		Initial Acceptance Test	23 days	Mon 19-09-23	Wed 19-10-23		
135		Preparation and Delivery of Equipment	10 days	Thu 19-10-10	Wed 19-10-23		
136		Ship 359 Poll Pads	14 days	Mon 19-10-07	Thu 19-10-24		
137		**October Shipment**	**25 days**	**Fri 19-10-25**	**Thu 19-11-28**		
138		Receive Shipment	5 days	Fri 19-10-25	Thu 19-10-31		
139		Initial Acceptance Test	24 days	Mon 19-10-28	Thu 19-11-28		
140		Preparation and Delivery of Equipment	10 days	Fri 19-11-15	Thu 19-11-28		
141		**November Shipment**	**19 days**	**Mon 19-11-25**	**Thu 19-12-19**		
142		Receive Shipment	5 days	Mon 19-11-25	Fri 19-11-29		
143		Initial Acceptance Test	18 days	Tue 19-11-26	Thu 19-12-19		
144		Preparation and Delivery of Equipment	10 days	Fri 19-12-06	Thu 19-12-19		
145		Ship 7342 Poll Pads	75 days	Mon 19-11-18	Fri 20-02-28		
146		**December Shipment - Any additional balance needed**	**25 days**	**Mon 19-12-16**	**Fri 20-01-17**		Any additional items or items that were initially rejected would be delivered to the DVS facility in
147		Receive Shipment	5 days	Mon 19-12-16	Fri 19-12-20		
148		Initial Acceptance Test	24 days	Mon 19-12-16	Thu 20-01-16		
149		Preparation and Delivery of Equipment	10 days	Mon 20-01-06	Fri 20-01-17		
150							
151		**Phase 1 Installations**	**69 days**	**Thu 19-08-01**	**Tue 19-11-05**		
152		November 2019 Election Day	1 day	Tue 19-11-05	Tue 19-11-05		
153		Counties receiving equipment during Phase 1	32 days	Thu 19-08-01	Fri 19-09-13		
154		GASOS					
155		Bacon					
156		Bartow					
157		Carroll					
158		Catoosa					

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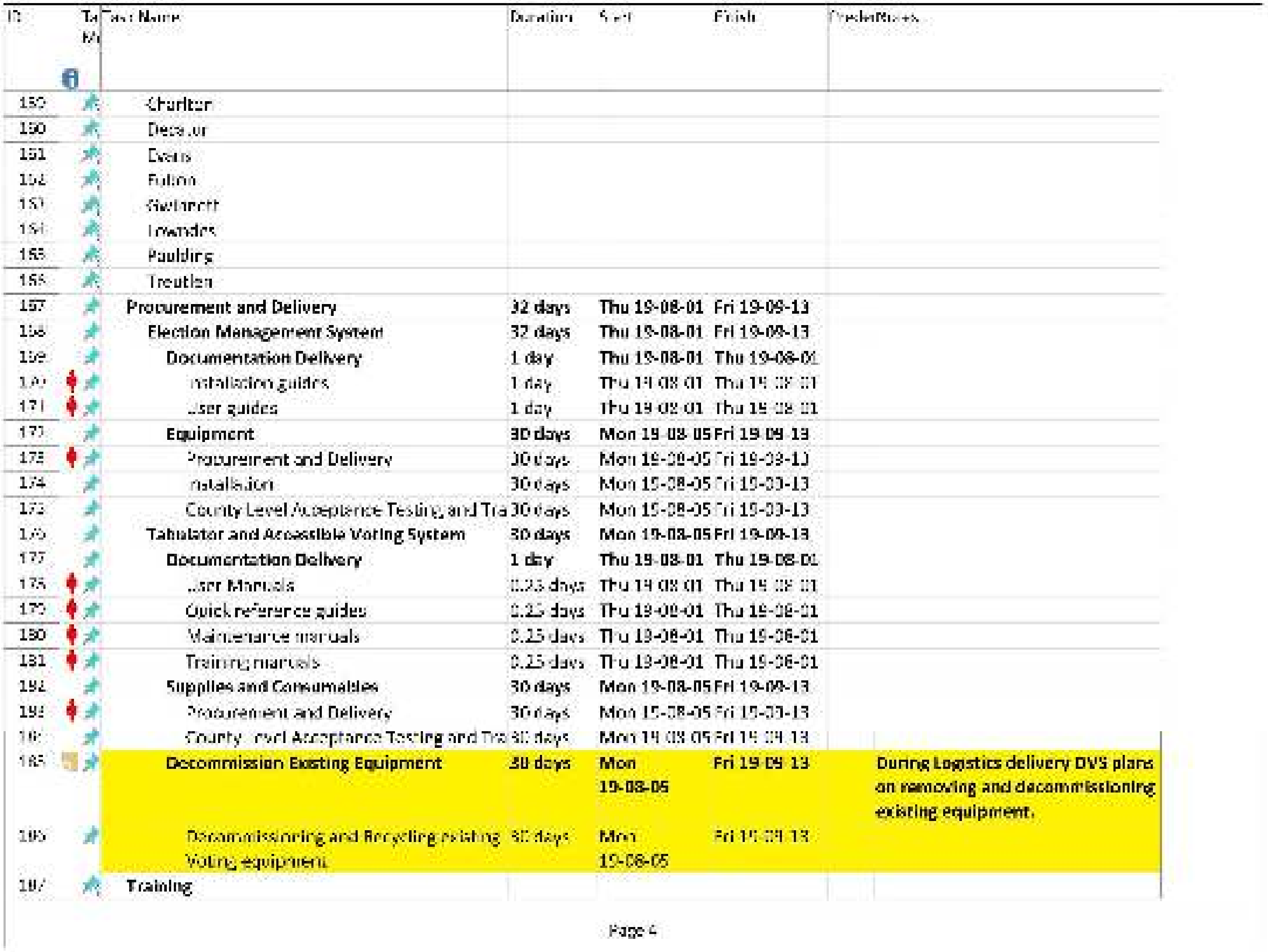

ID	ⓘ	Task Mode	Task Name	Duration	Start	Finish	Prede	Notes
159		📌	Charlton					
160		📌	Decatur					
161		📌	Evans					
162		📌	Fulton					
163		📌	Gwinnett					
164		📌	Lowndes					
165		📌	Paulding					
166		📌	Treutlen					
167		📌	**Procurement and Delivery**	**32 days**	**Thu 19-08-01**	**Fri 19-09-13**		
168		📌	**Election Management System**	**32 days**	**Thu 19-08-01**	**Fri 19-09-13**		
169		📌	**Documentation Delivery**	**1 day**	**Thu 19-08-01**	**Thu 19-08-01**		
170	♦	📌	Installation guides	1 day	Thu 19-08-01	Thu 19-08-01		
171	♦	📌	User guides	1 day	Thu 19-08-01	Thu 19-08-01		
172		📌	**Equipment**	**30 days**	**Mon 19-08-05**	**Fri 19-09-13**		
173	♦	📌	Procurement and Delivery	30 days	Mon 19-08-05	Fri 19-09-13		
174		📌	Installation	30 days	Mon 19-08-05	Fri 19-09-13		
175		📌	County Level Acceptance Testing and Tra	30 days	Mon 19-08-05	Fri 19-09-13		
176		📌	**Tabulator and Accessible Voting System**	**30 days**	**Mon 19-08-05**	**Fri 19-09-13**		
177		📌	**Documentation Delivery**	**1 day**	**Thu 19-08-01**	**Thu 19-08-01**		
178	♦	📌	User Manuals	0.25 days	Thu 19-08-01	Thu 19-08-01		
179	♦	📌	Quick reference guides	0.25 days	Thu 19-08-01	Thu 19-08-01		
180	♦	📌	Maintenance manuals	0.25 days	Thu 19-08-01	Thu 19-08-01		
181	♦	📌	Training manuals	0.25 days	Thu 19-08-01	Thu 19-08-01		
182		📌	**Supplies and Consumables**	**30 days**	**Mon 19-08-05**	**Fri 19-09-13**		
183	♦	📌	Procurement and Delivery	30 days	Mon 19-08-05	Fri 19-09-13		
184		📌	County Level Acceptance Testing and Tra	30 days	Mon 19-08-05	Fri 19-09-13		
185	🗒	📌	**Decommission Existing Equipment**	**30 days**	**Mon 19-08-05**	**Fri 19-09-13**		**During Logistics delivery DVS plans on removing and decommissioning existing equipment.**
186		📌	Decommissioning and Recycling existing Voting equipment	30 days	Mon 19-08-05	Fri 19-09-13		
187		📌	**Training**					

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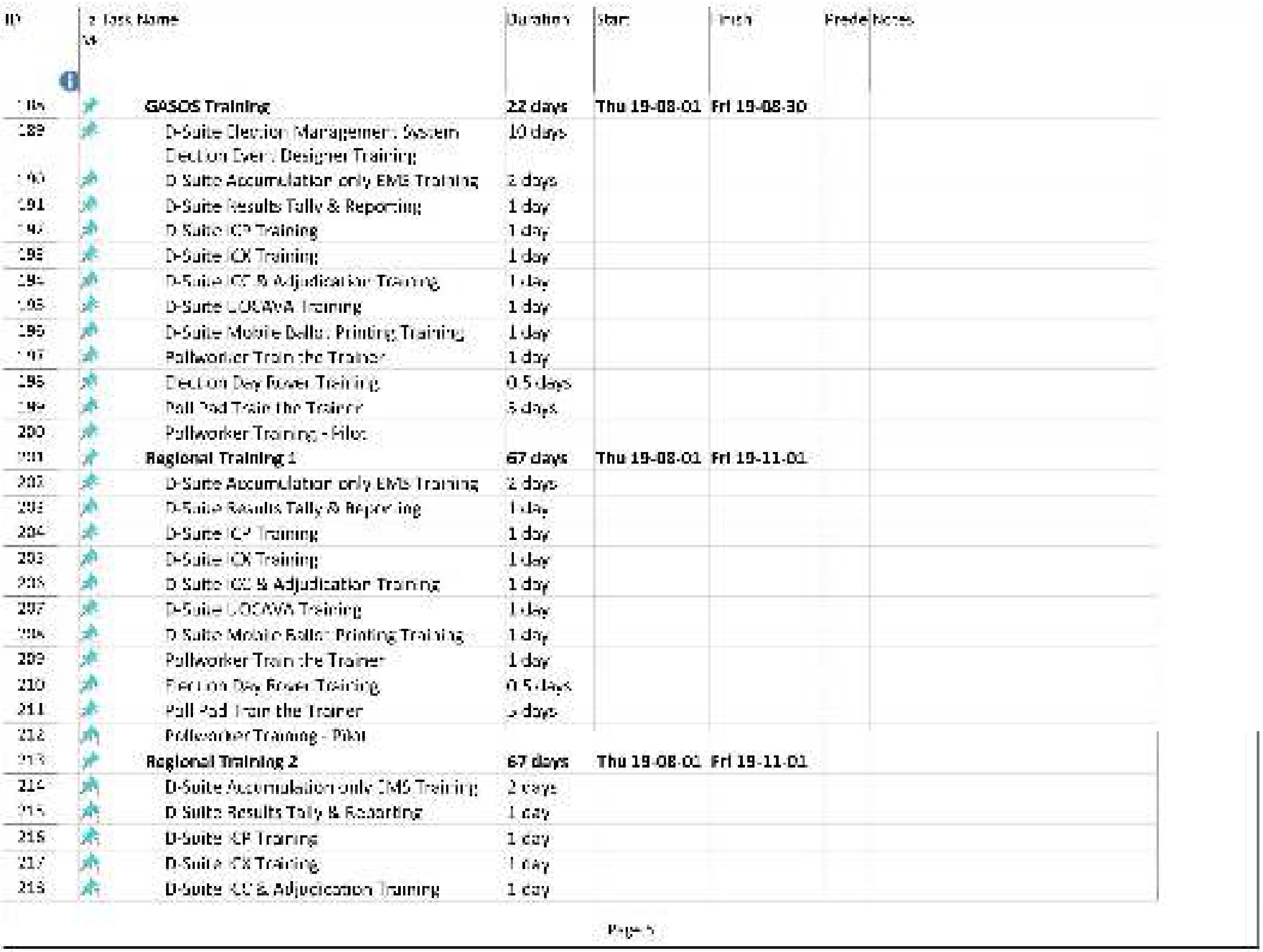

ID	Task Name	Duration	Start	Finish	Prede	Notes
188	**GASOS Training**	**22 days**	**Thu 19-08-01**	**Fri 19-08-30**		
189	D-Suite Election Management System Election Event Designer Training	10 days				
190	D-Suite Accumulation only EMS Training	2 days				
191	D-Suite Results Tally & Reporting	1 day				
192	D-Suite ICP Training	1 day				
193	D-Suite ICX Training	1 day				
194	D-Suite ICC & Adjudication Training	1 day				
195	D-Suite UOCAVA Training	1 day				
196	D-Suite Mobile Ballot Printing Training	1 day				
197	Pollworker Train the Trainer	1 day				
198	Election Day Rover Training	0.5 days				
199	Poll Pad Train the Trainer	5 days				
200	Pollworker Training - Pilot					
201	**Regional Training 1**	**67 days**	**Thu 19-08-01**	**Fri 19-11-01**		
202	D-Suite Accumulation only EMS Training	2 days				
203	D-Suite Results Tally & Reporting	1 day				
204	D-Suite ICP Training	1 day				
205	D-Suite ICX Training	1 day				
206	D-Suite ICC & Adjudication Training	1 day				
207	D-Suite UOCAVA Training	1 day				
208	D-Suite Mobile Ballot Printing Training	1 day				
209	Pollworker Train the Trainer	1 day				
210	Election Day Rover Training	0.5 days				
211	Poll Pad Train the Trainer	5 days				
212	Pollworker Training - Pilot					
213	**Regional Training 2**	**67 days**	**Thu 19-08-01**	**Fri 19-11-01**		
214	D-Suite Accumulation only EMS Training	2 days				
215	D-Suite Results Tally & Reporting	1 day				
216	D-Suite ICP Training	1 day				
217	D-Suite ICX Training	1 day				
218	D-Suite ICC & Adjudication Training	1 day				

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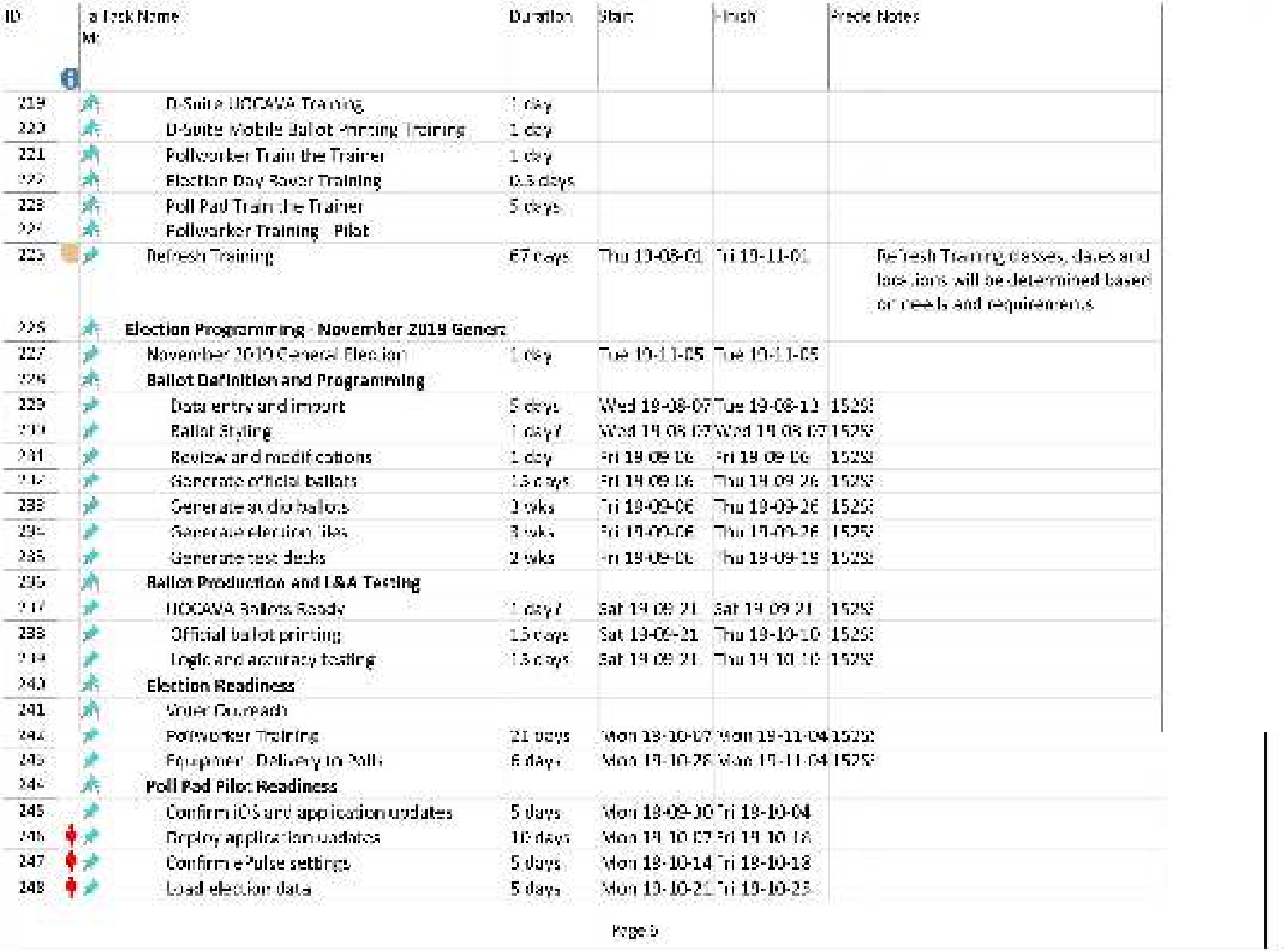

ID	Task Name	Duration	Start	Finish	Prede	Notes
219	D-Suite UOCAVA Training	1 day				
220	D-Suite Mobile Ballot Printing Training	1 day				
221	Pollworker Train the Trainer	1 day				
222	Election Day Rover Training	0.5 days				
223	Poll Pad Train the Trainer	5 days				
224	Pollworker Training - Pilot					
225	Refresh Training	67 days	Thu 19-08-01	Fri 19-11-01		Refresh Training classes, dates and locations will be determined based on needs and requirements
226	**Election Programming - November 2019 Genera**					
227	November 2019 General Election	1 day	Tue 19-11-05	Tue 19-11-05		
228	**Ballot Definition and Programming**					
229	Data entry and import	5 days	Wed 19-08-07	Tue 19-08-13	1529	
230	Ballot Styling	1 day?	Wed 19-08-07	Wed 19-08-07	1529	
231	Review and modifications	1 day	Fri 19-09-06	Fri 19-09-06	1529	
232	Generate official ballots	15 days	Fri 19-09-06	Thu 19-09-26	1529	
233	Generate audio ballots	3 wks	Fri 19-09-06	Thu 19-09-26	1529	
234	Generate election files	3 wks	Fri 19-09-06	Thu 19-09-26	1529	
235	Generate test decks	2 wks	Fri 19-09-06	Thu 19-09-19	1529	
236	**Ballot Production and L&A Testing**					
237	UOCAVA Ballots Ready	1 day?	Sat 19-09-21	Sat 19-09-21	1529	
238	Official ballot printing	15 days	Sat 19-09-21	Thu 19-10-10	1529	
239	Logic and accuracy testing	15 days	Sat 19-09-21	Thu 19-10-10	1529	
240	**Election Readiness**					
241	Voter Outreach					
242	Pollworker Training	21 days	Mon 19-10-07	Mon 19-11-04	1529	
243	Equipment Delivery to Polls	6 days	Mon 19-10-28	Mon 19-11-04	1529	
244	**Poll Pad Pilot Readiness**					
245	Confirm iOS and application updates	5 days	Mon 19-09-30	Fri 19-10-04		
246	Deploy application updates	10 days	Mon 19-10-07	Fri 19-10-18		
247	Confirm ePulse settings	5 days	Mon 19-10-14	Fri 19-10-18		
248	Load election data	5 days	Mon 19-10-21	Fri 19-10-25		

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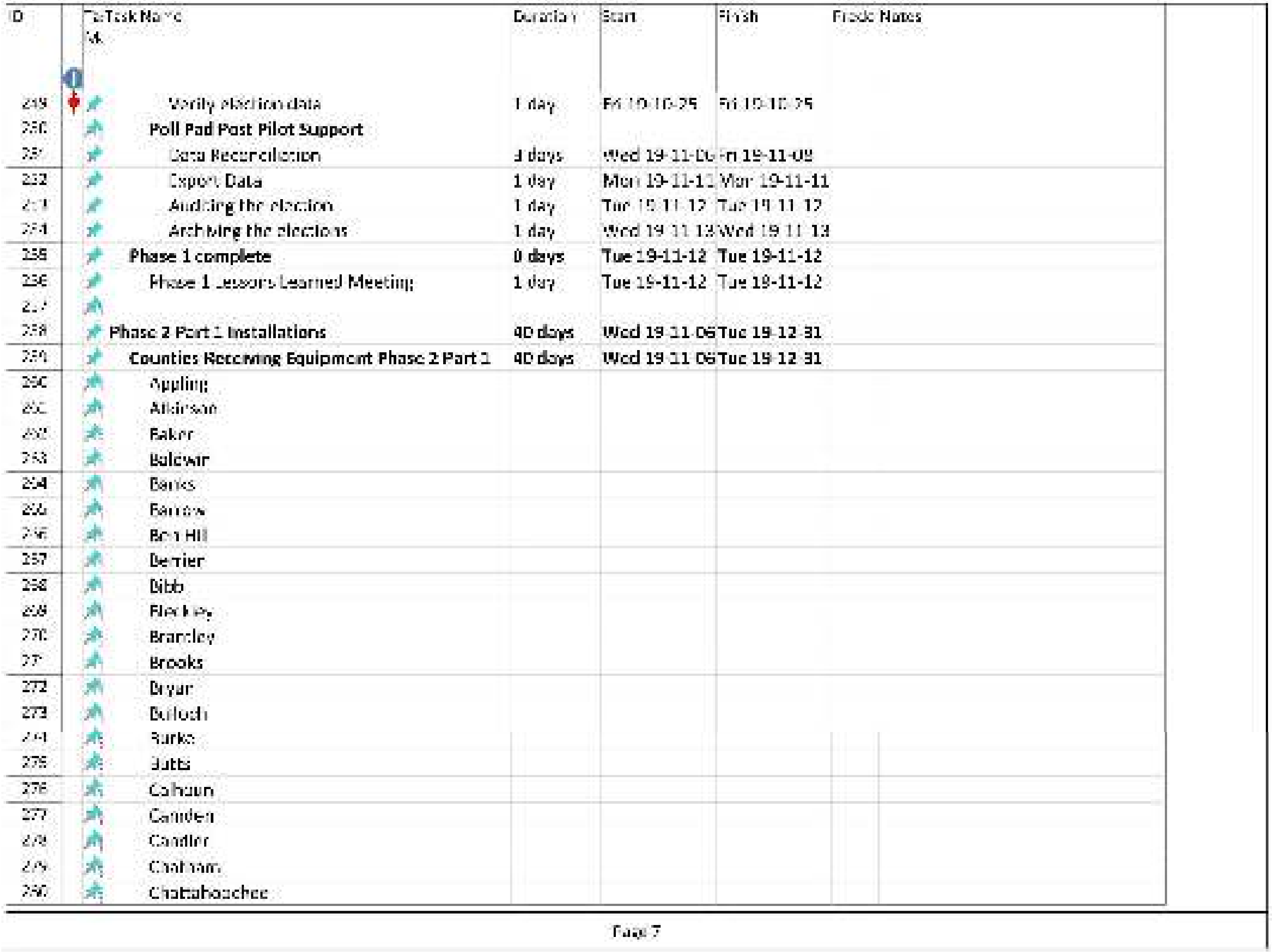

ID	Ta sk	Task Name	Duration	Start	Finish	Prede	Notes
249		Verify election data	1 day	Fri 19-10-25	Fri 19-10-25		
250		**Poll Pad Post Pilot Support**					
251		Data Reconciliation	3 days	Wed 19-11-06	Fri 19-11-08		
252		Export Data	1 day	Mon 19-11-11	Mon 19-11-11		
253		Auditing the election	1 day	Tue 19-11-12	Tue 19-11-12		
254		Archiving the elections	1 day	Wed 19-11-13	Wed 19-11-13		
255		**Phase 1 complete**	**0 days**	**Tue 19-11-12**	**Tue 19-11-12**		
256		Phase 1 Lessons Learned Meeting	1 day	Tue 19-11-12	Tue 19-11-12		
257							
258		**Phase 2 Part 1 Installations**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**		
259		**Counties Receiving Equipment Phase 2 Part 1**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**		
260		Appling					
261		Atkinson					
262		Baker					
263		Baldwin					
264		Banks					
265		Barrow					
266		Ben Hill					
267		Berrien					
268		Bibb					
269		Bleckley					
270		Brantley					
271		Brooks					
272		Bryan					
273		Bulloch					
274		Burke					
275		Butts					
276		Calhoun					
277		Camden					
278		Candler					
279		Chatham					
280		Chattahoochee					

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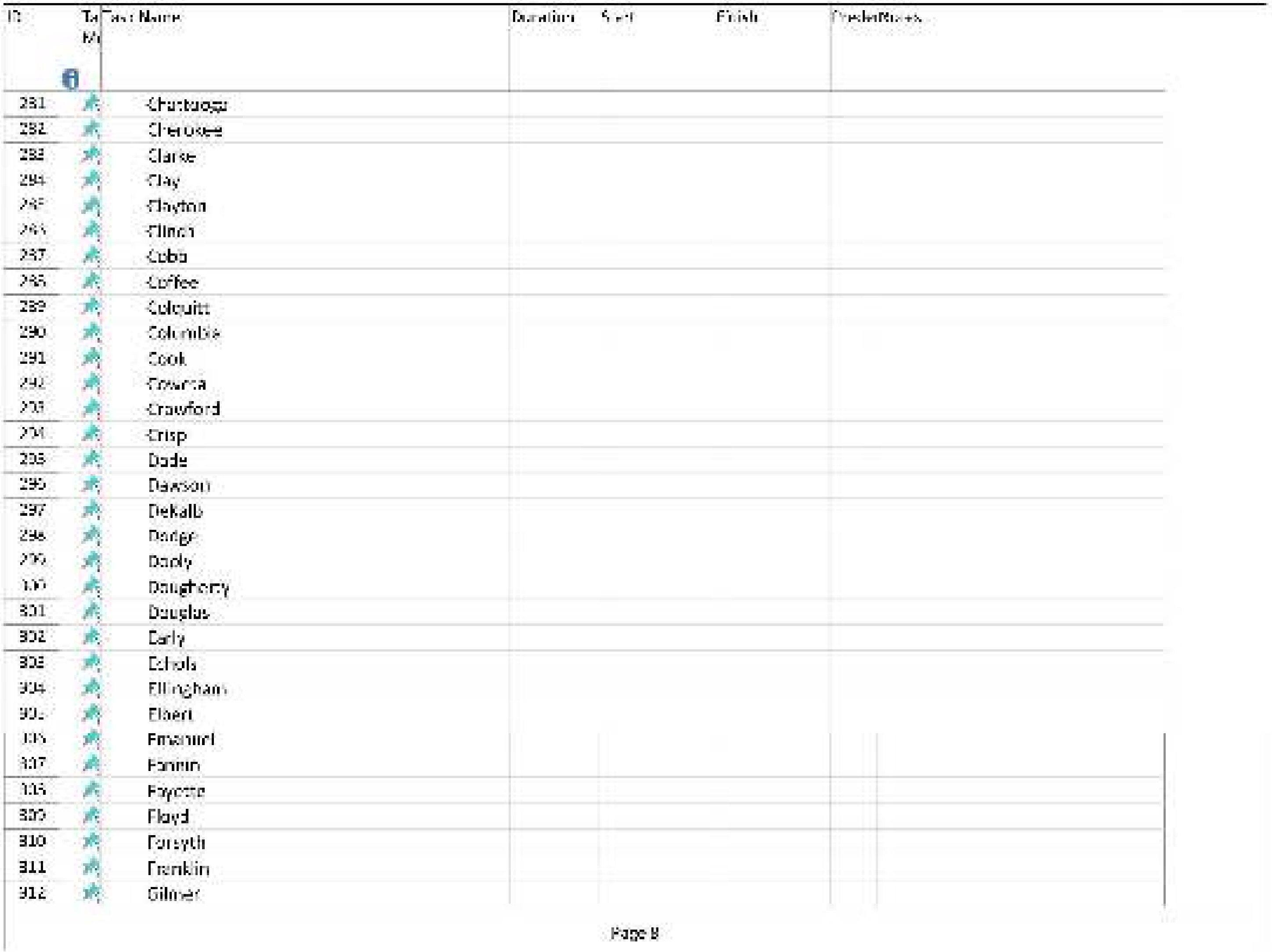

ID	Ta M	Task Name	Duration	Start	Finish	Predecessors
281		Chattooga				
282		Cherokee				
283		Clarke				
284		Clay				
285		Clayton				
286		Clinch				
287		Cobb				
288		Coffee				
289		Colquitt				
290		Columbia				
291		Cook				
292		Coweta				
293		Crawford				
294		Crisp				
295		Dade				
296		Dawson				
297		DeKalb				
298		Dodge				
299		Dooly				
300		Dougherty				
301		Douglas				
302		Early				
303		Echols				
304		Effingham				
305		Elbert				
306		Emanuel				
307		Fannin				
308		Fayette				
309		Floyd				
310		Forsyth				
311		Franklin				
312		Gilmer				

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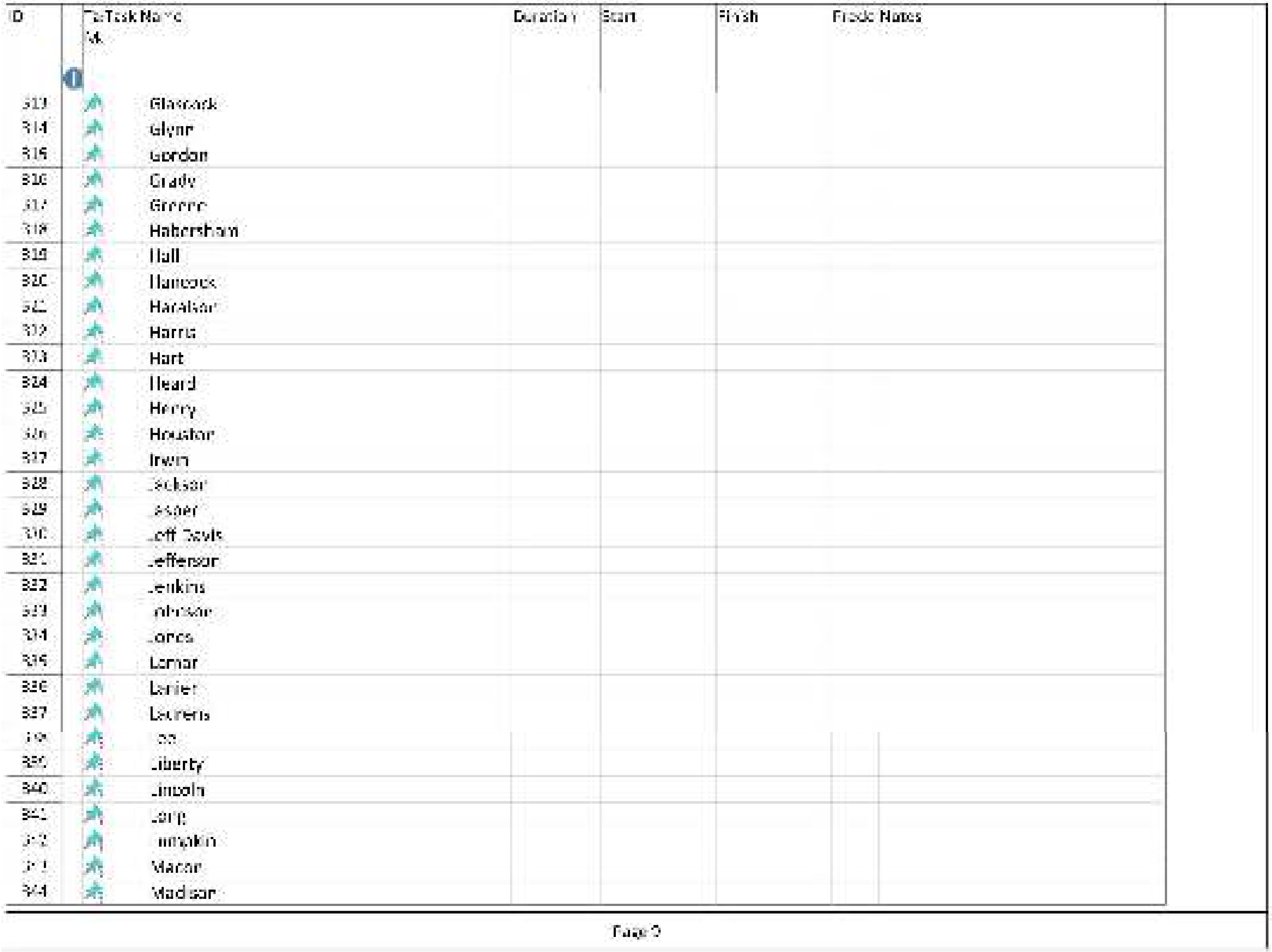

ID	Ta Mc	Task Name	Duration	Start	Finish	Predc	Notes
313		Glascock					
314		Glynn					
315		Gordon					
316		Grady					
317		Greene					
318		Habersham					
319		Hall					
320		Hancock					
321		Haralson					
322		Harris					
323		Hart					
324		Heard					
325		Henry					
326		Houston					
327		Irwin					
328		Jackson					
329		Jasper					
330		Jeff Davis					
331		Jefferson					
332		Jenkins					
333		Johnson					
334		Jones					
335		Lamar					
336		Lanier					
337		Laurens					
338		Lee					
339		Liberty					
340		Lincoln					
341		Long					
342		Lumpkin					
343		Macon					
344		Madison					

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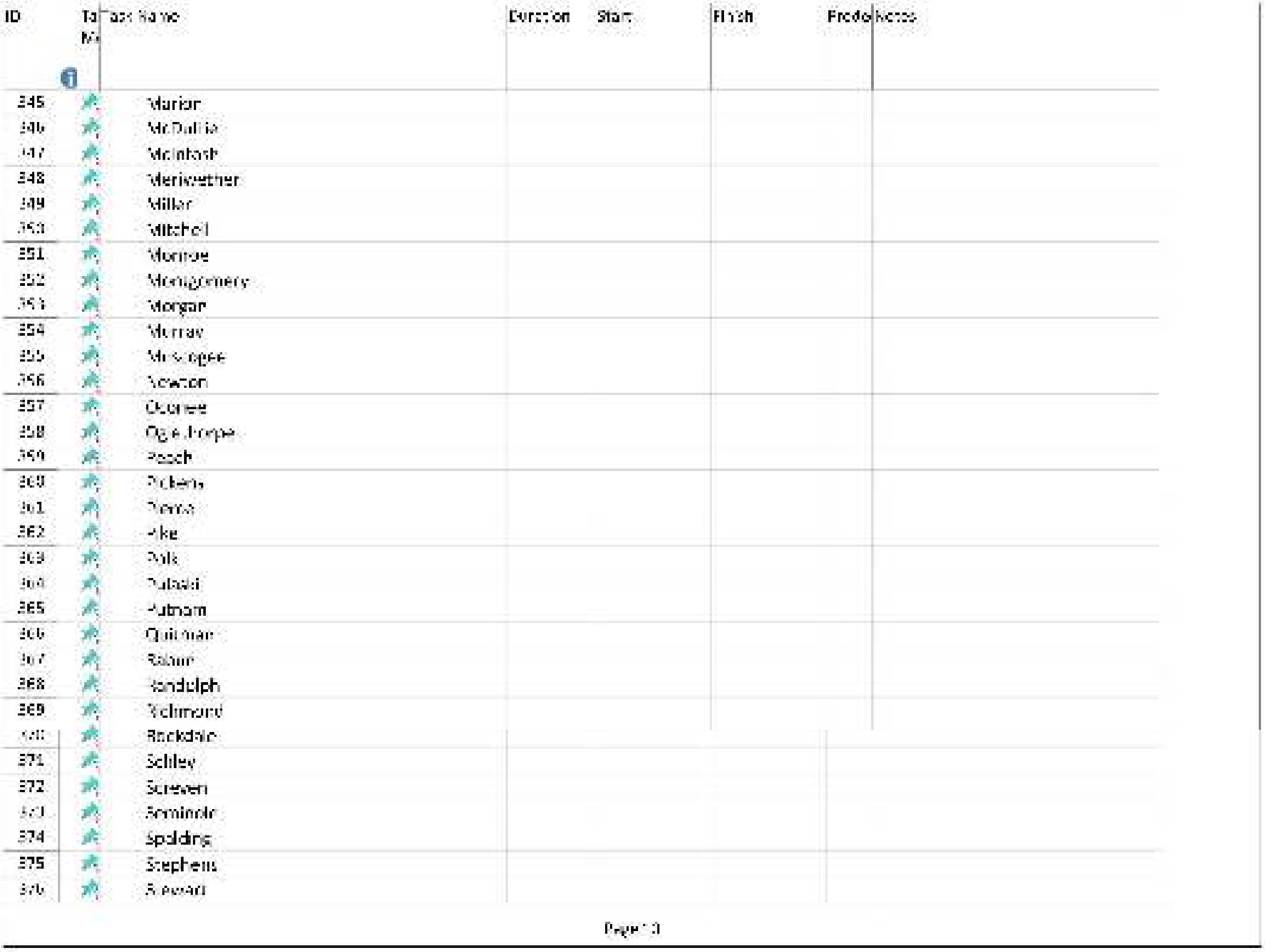

ID	Ta Mo	Task Name	Duration	Start	Finish	Prede	Notes
345	📌	Marion					
346	📌	McDuffie					
347	📌	McIntosh					
348	📌	Meriwether					
349	📌	Miller					
350	📌	Mitchell					
351	📌	Monroe					
352	📌	Montgomery					
353	📌	Morgan					
354	📌	Murray					
355	📌	Muscogee					
356	📌	Newton					
357	📌	Oconee					
358	📌	Oglethorpe					
359	📌	Peach					
360	📌	Pickens					
361	📌	Pierce					
362	📌	Pike					
363	📌	Polk					
364	📌	Pulaski					
365	📌	Putnam					
366	📌	Quitman					
367	📌	Rabun					
368	📌	Randolph					
369	📌	Richmond					
370	📌	Rockdale					
371	📌	Schley					
372	📌	Screven					
373	📌	Seminole					
374	📌	Spalding					
375	📌	Stephens					
376	📌	Stewart					

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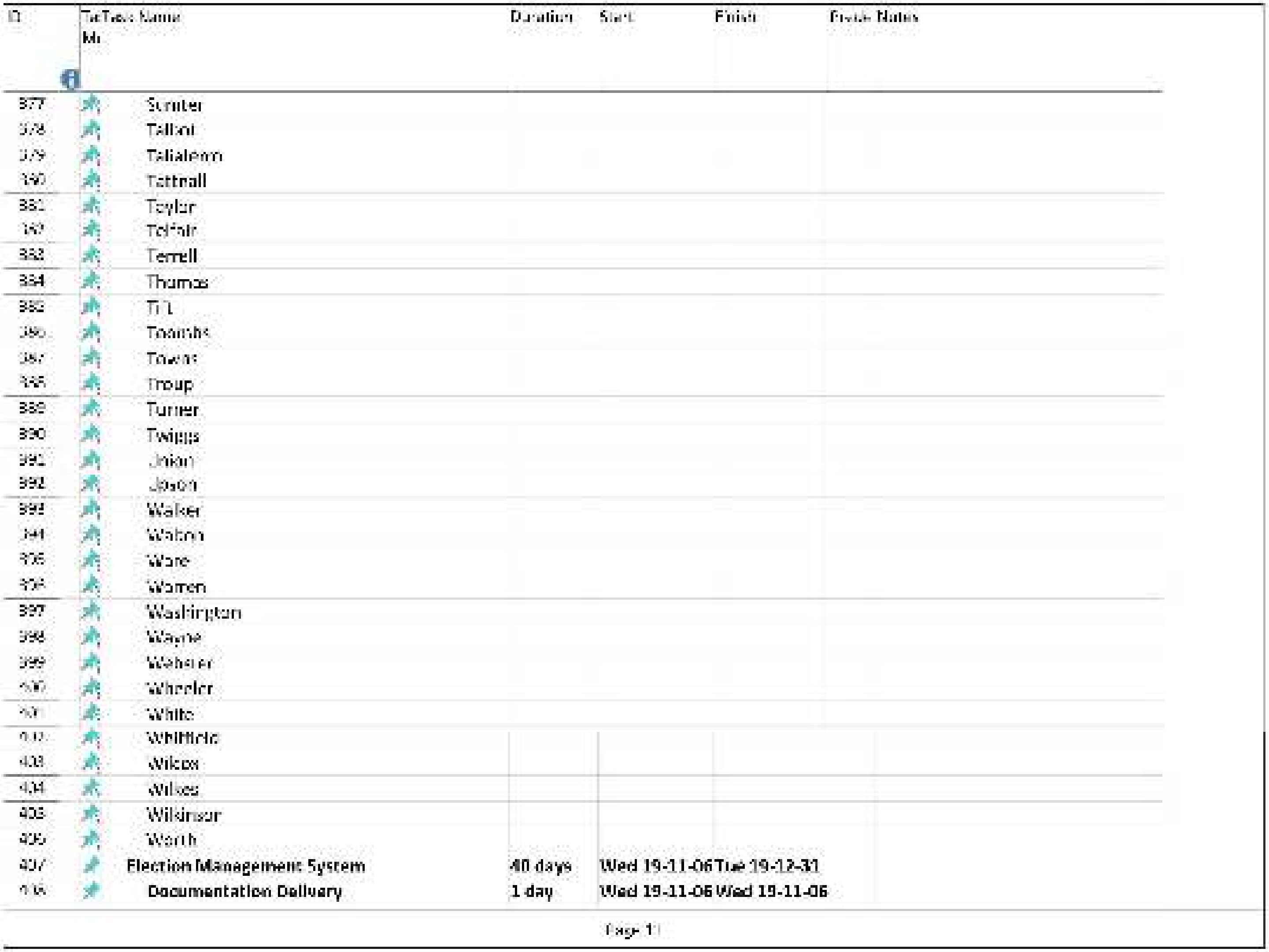

ID	Ta Mo	Task Name	Duration	Start	Finish	Prede	Notes
377		Sumter					
378		Talbot					
379		Taliaferro					
380		Tattnall					
381		Taylor					
382		Telfair					
383		Terrell					
384		Thomas					
385		Tift					
386		Toombs					
387		Towns					
388		Troup					
389		Turner					
390		Twiggs					
391		Union					
392		Upson					
393		Walker					
394		Walton					
395		Ware					
396		Warren					
397		Washington					
398		Wayne					
399		Webster					
400		Wheeler					
401		White					
402		Whitfield					
403		Wilcox					
404		Wilkes					
405		Wilkinson					
406		Worth					
407		**Election Management System**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**		
408		**Documentation Delivery**	**1 day**	**Wed 19-11-06**	**Wed 19-11-06**		

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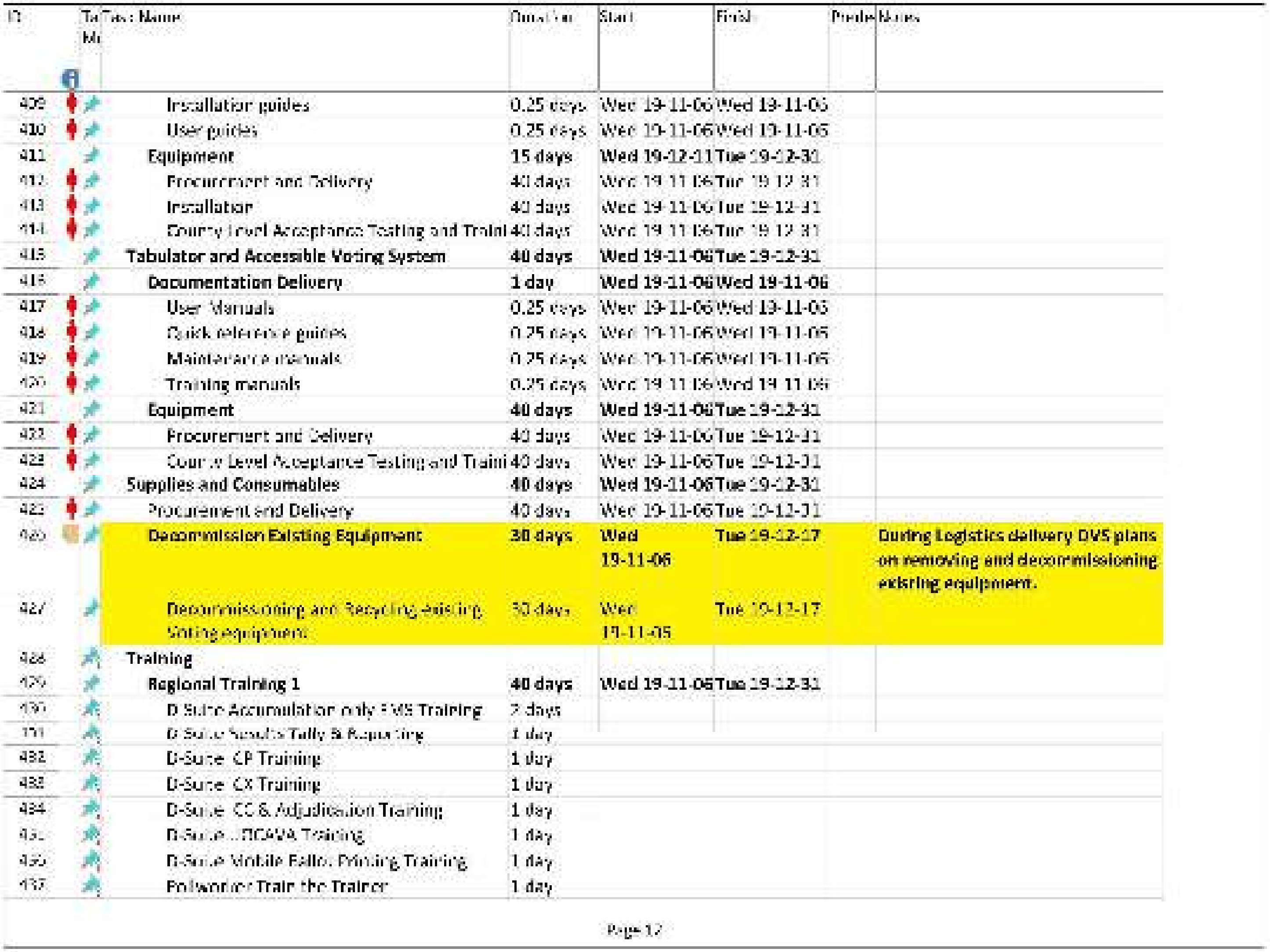

ID	Ta Mo	Task Name	Duration	Start	Finish	Prede	Notes
409		Installation guides	0.25 days	Wed 19-11-06	Wed 19-11-06		
410		User guides	0.25 days	Wed 19-11-06	Wed 19-11-06		
411		**Equipment**	**15 days**	**Wed 19-12-11**	**Tue 19-12-31**		
412		Procurement and Delivery	40 days	Wed 19-11-06	Tue 19-12-31		
413		Installation	40 days	Wed 19-11-06	Tue 19-12-31		
414		County Level Acceptance Testing and Traini	40 days	Wed 19-11-06	Tue 19-12-31		
415		**Tabulator and Accessible Voting System**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**		
416		**Documentation Delivery**	**1 day**	**Wed 19-11-06**	**Wed 19-11-06**		
417		User Manuals	0.25 days	Wed 19-11-06	Wed 19-11-06		
418		Quick reference guides	0.25 days	Wed 19-11-06	Wed 19-11-06		
419		Maintenance manuals	0.25 days	Wed 19-11-06	Wed 19-11-06		
420		Training manuals	0.25 days	Wed 19-11-06	Wed 19-11-06		
421		**Equipment**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**		
422		Procurement and Delivery	40 days	Wed 19-11-06	Tue 19-12-31		
423		County Level Acceptance Testing and Traini	40 days	Wed 19-11-06	Tue 19-12-31		
424		**Supplies and Consumables**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**		
425		Procurement and Delivery	40 days	Wed 19-11-06	Tue 19-12-31		
426		**Decommission Existing Equipment**	**30 days**	**Wed 19-11-06**	**Tue 19-12-17**		**During Logistics delivery DVS plans on removing and decommissioning existing equipment.**
427		Decommissioning and Recycling existing Voting equipment	30 days	Wed 19-11-06	Tue 19-12-17		
428		**Training**					
429		**Regional Training 1**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**		
430		D-Suite Accumulation only EMS Training	2 days				
431		*D-Suite Results Tally & Reporting*	*1 day*				
432		D-Suite ICP Training	1 day				
433		D-Suite ICX Training	1 day				
434		D-Suite ICC & Adjudication Training	1 day				
435		D-Suite UOCAVA Training	1 day				
436		D-Suite Mobile Ballot Printing Training	1 day				
437		Pollworker Train the Trainer	1 day				

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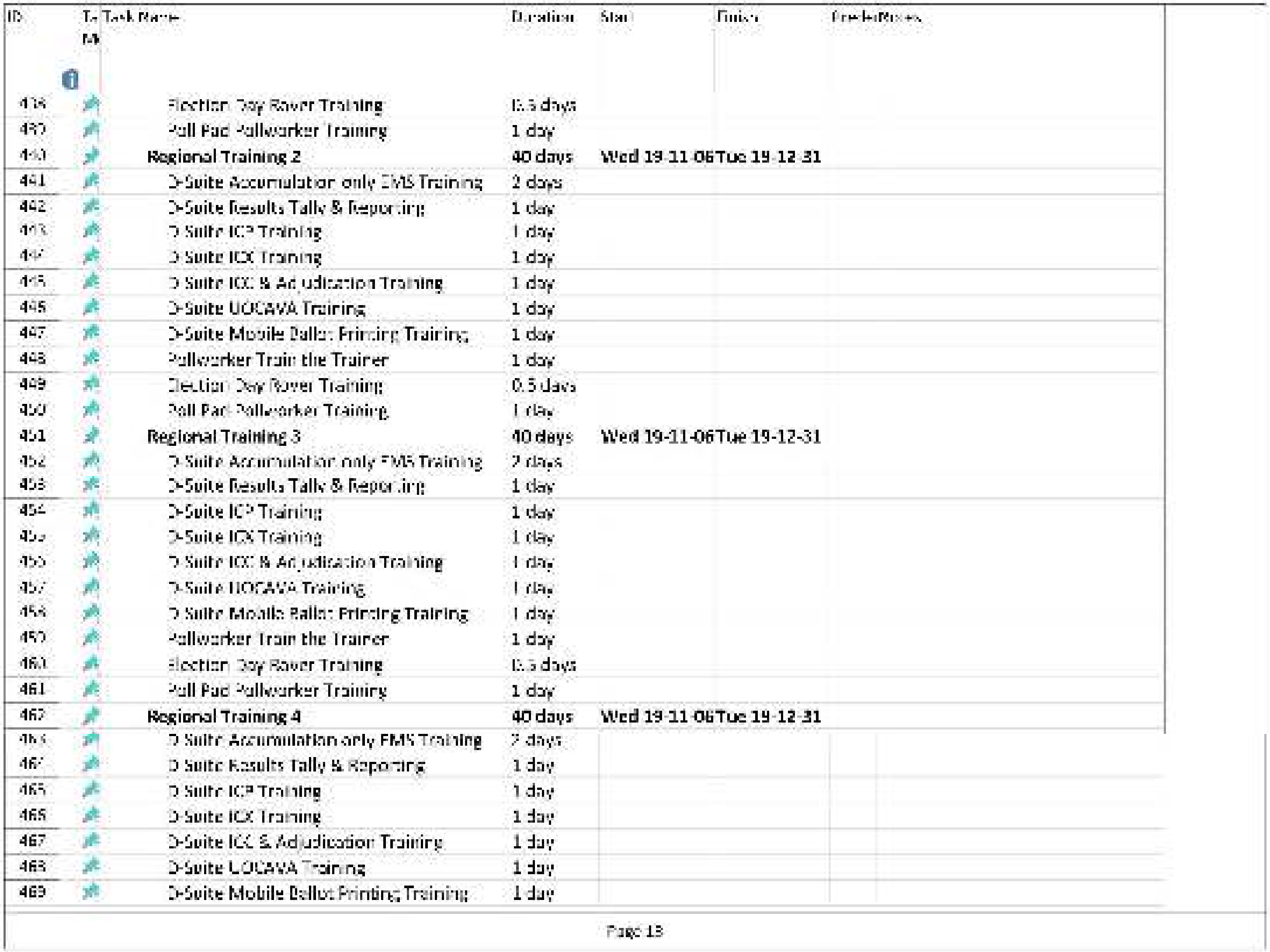

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
438		Election Day Rover Training	0.5 days			
439		Poll Pad Pollworker Training	1 day			
440		**Regional Training 2**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**	
441		D-Suite Accumulation only EMS Training	2 days			
442		D-Suite Results Tally & Reporting	1 day			
443		D-Suite ICP Training	1 day			
444		D-Suite ICX Training	1 day			
445		D-Suite ICC & Adjudication Training	1 day			
446		D-Suite UOCAVA Training	1 day			
447		D-Suite Mobile Ballot Printing Training	1 day			
448		Pollworker Train the Trainer	1 day			
449		Election Day Rover Training	0.5 days			
450		Poll Pad Pollworker Training	1 day			
451		**Regional Training 3**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**	
452		D-Suite Accumulation only EMS Training	2 days			
453		D-Suite Results Tally & Reporting	1 day			
454		D-Suite ICP Training	1 day			
455		D-Suite ICX Training	1 day			
456		D-Suite ICC & Adjudication Training	1 day			
457		D-Suite UOCAVA Training	1 day			
458		D-Suite Mobile Ballot Printing Training	1 day			
459		Pollworker Train the Trainer	1 day			
460		Election Day Rover Training	0.5 days			
461		Poll Pad Pollworker Training	1 day			
462		**Regional Training 4**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**	
463		D-Suite Accumulation only EMS Training	2 days			
464		D-Suite Results Tally & Reporting	1 day			
465		D-Suite ICP Training	1 day			
466		D-Suite ICX Training	1 day			
467		D-Suite ICC & Adjudication Training	1 day			
468		D-Suite UOCAVA Training	1 day			
469		D-Suite Mobile Ballot Printing Training	1 day			

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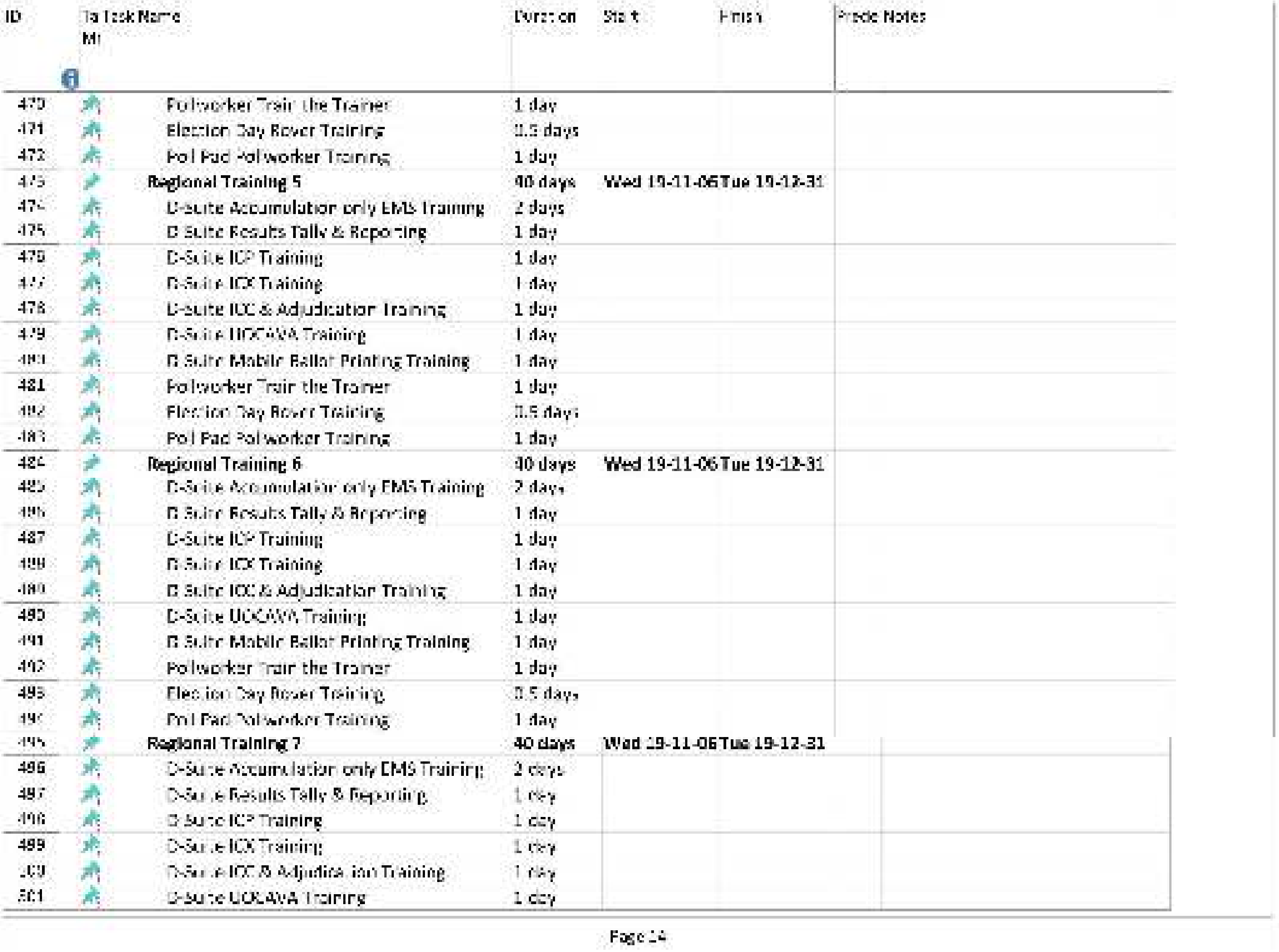
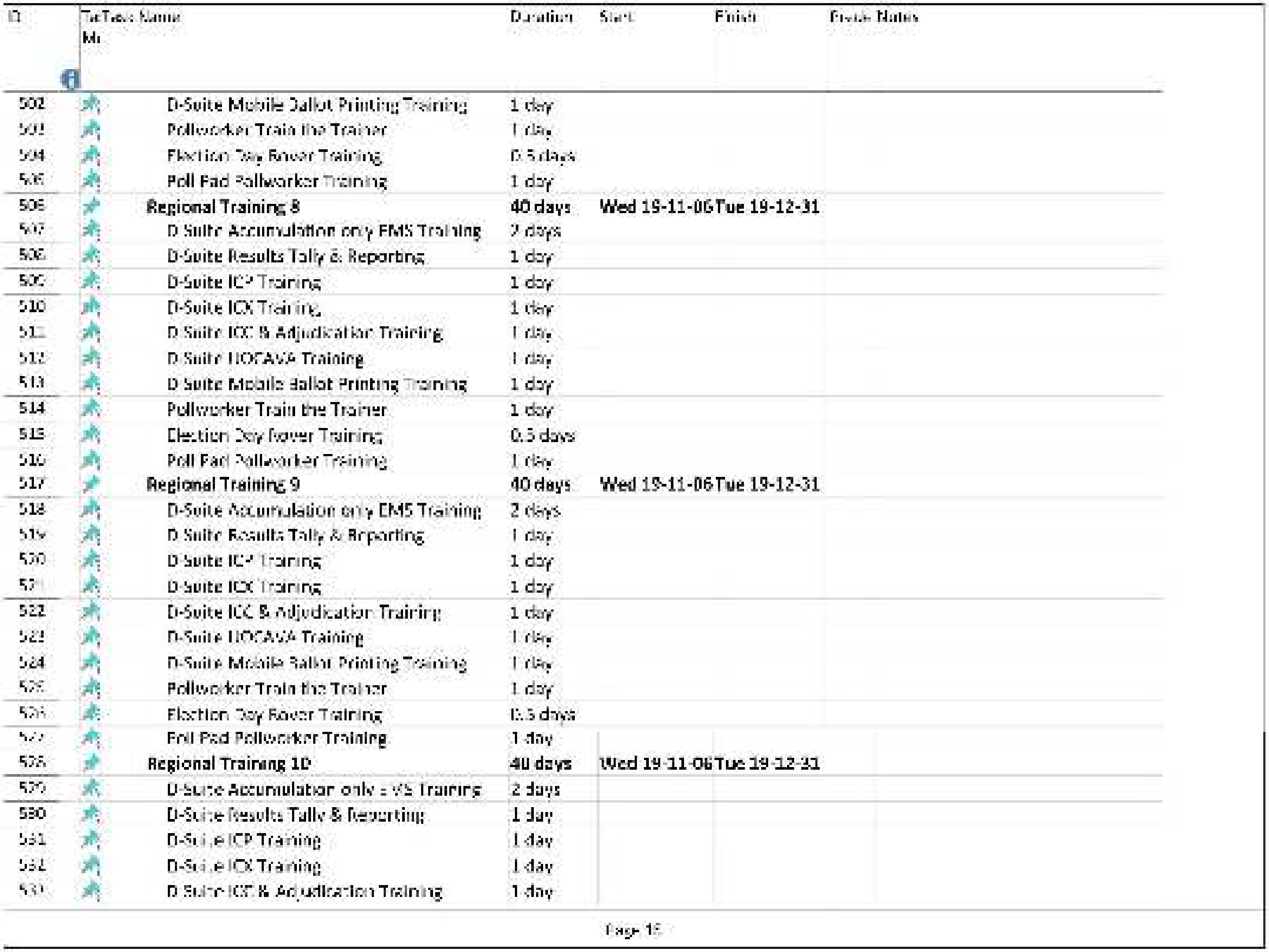
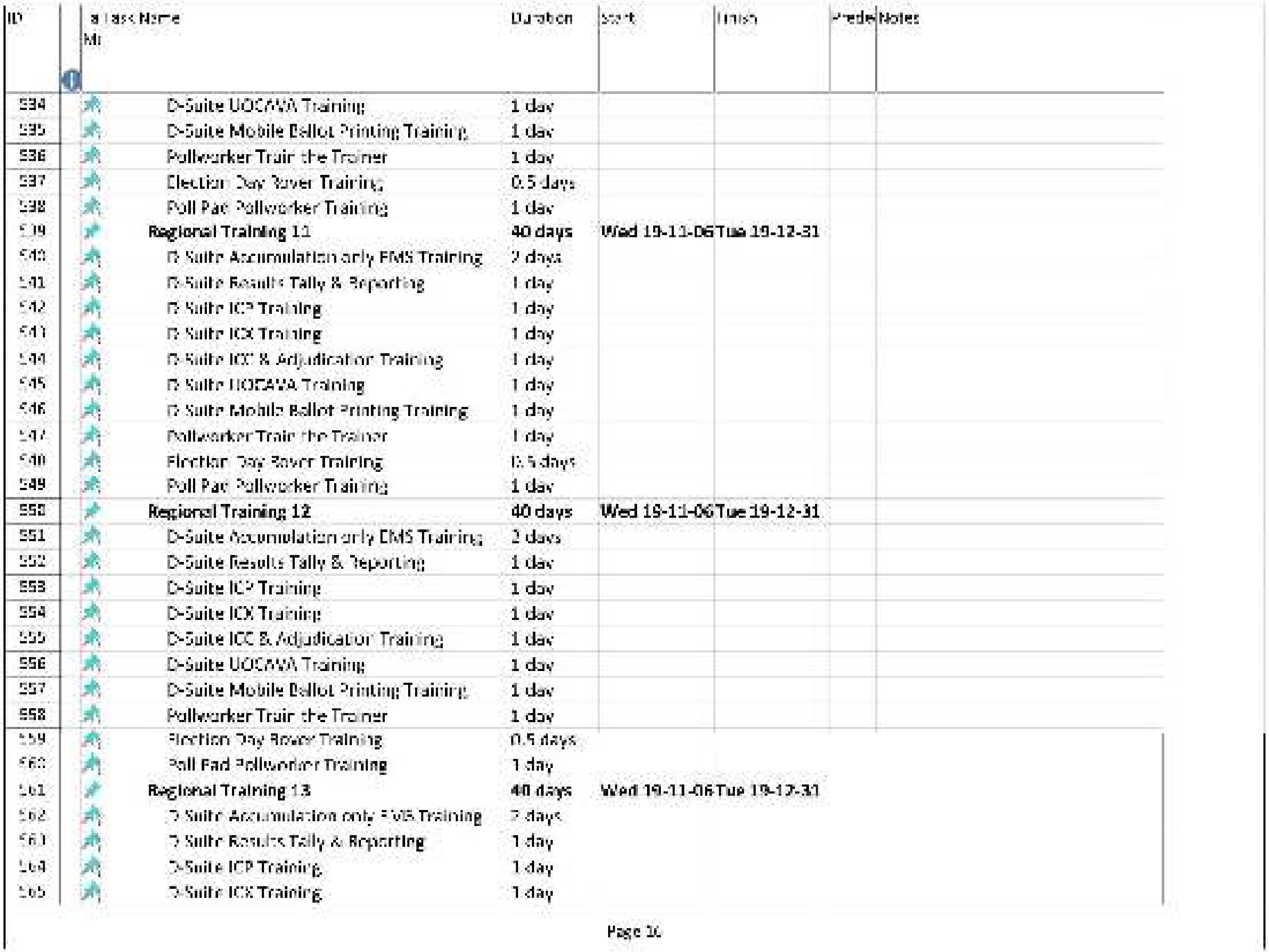


ID	Ta Mi	Task Name	Duration	Start	Finish	Prede	Notes
470		Pollworker Train the Trainer	1 day				
471		Election Day Rover Training	0.5 days				
472		Poll Pad Pollworker Training	1 day				
473		**Regional Training 5**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**		
474		D-Suite Accumulation only EMS Training	2 days				
475		D-Suite Results Tally & Reporting	1 day				
476		D-Suite ICP Training	1 day				
477		D-Suite ICX Training	1 day				
478		D-Suite ICC & Adjudication Training	1 day				
479		D-Suite UOCAVA Training	1 day				
480		D-Suite Mobile Ballot Printing Training	1 day				
481		Pollworker Train the Trainer	1 day				
482		Election Day Rover Training	0.5 days				
483		Poll Pad Pollworker Training	1 day				
484		**Regional Training 6**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**		
485		D-Suite Accumulation only EMS Training	2 days				
486		D-Suite Results Tally & Reporting	1 day				
487		D-Suite ICP Training	1 day				
488		D-Suite ICX Training	1 day				
489		D-Suite ICC & Adjudication Training	1 day				
490		D-Suite UOCAVA Training	1 day				
491		D-Suite Mobile Ballot Printing Training	1 day				
492		Pollworker Train the Trainer	1 day				
493		Election Day Rover Training	0.5 days				
494		Poll Pad Pollworker Training	1 day				
495		**Regional Training 7**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**		
496		D-Suite Accumulation only EMS Training	2 days				
497		D-Suite Results Tally & Reporting	1 day				
498		D-Suite ICP Training	1 day				
499		D-Suite ICX Training	1 day				
500		D-Suite ICC & Adjudication Training	1 day				
501		D-Suite UOCAVA Training	1 day				



ID	Ta Mo	Task Name	Duration	Start	Finish	Trace Notes
502		D-Suite Mobile Ballot Printing Training	1 day			
503		Pollworker Train the Trainer	1 day			
504		Election Day Rover Training	0.5 days			
505		Poll Pad Pollworker Training	1 day			
506		**Regional Training 8**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**	
507		D-Suite Accumulation only EMS Training	2 days			
508		D-Suite Results Tally & Reporting	1 day			
509		D-Suite ICP Training	1 day			
510		D-Suite ICX Training	1 day			
511		D-Suite ICC & Adjudication Training	1 day			
512		D-Suite UOCAVA Training	1 day			
513		D-Suite Mobile Ballot Printing Training	1 day			
514		Pollworker Train the Trainer	1 day			
515		Election Day Rover Training	0.5 days			
516		Poll Pad Pollworker Training	1 day			
517		**Regional Training 9**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**	
518		D-Suite Accumulation only EMS Training	2 days			
519		D-Suite Results Tally & Reporting	1 day			
520		D-Suite ICP Training	1 day			
521		D-Suite ICX Training	1 day			
522		D-Suite ICC & Adjudication Training	1 day			
523		D-Suite UOCAVA Training	1 day			
524		D-Suite Mobile Ballot Printing Training	1 day			
525		Pollworker Train the Trainer	1 day			
526		Election Day Rover Training	0.5 days			
527		Poll Pad Pollworker Training	1 day			
528		**Regional Training 10**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**	
529		D-Suite Accumulation only EMS Training	2 days			
530		D-Suite Results Tally & Reporting	1 day			
531		D-Suite ICP Training	1 day			
532		D-Suite ICX Training	1 day			
533		D-Suite ICC & Adjudication Training	1 day			



ID	ℹ	Task Mode	Task Name	Duration	Start	Finish	Prede	Notes
534		📌	D-Suite UOCAVA Training	1 day				
535		📌	D-Suite Mobile Ballot Printing Training	1 day				
536		📌	Pollworker Train the Trainer	1 day				
537		📌	Election Day Rover Training	0.5 days				
538		📌	Poll Pad Pollworker Training	1 day				
539		📌	**Regional Training 11**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**		
540		📌	D-Suite Accumulation only EMS Training	2 days				
541		📌	D-Suite Results Tally & Reporting	1 day				
542		📌	D-Suite ICP Training	1 day				
543		📌	D-Suite ICX Training	1 day				
544		📌	D-Suite ICC & Adjudication Training	1 day				
545		📌	D-Suite UOCAVA Training	1 day				
546		📌	D-Suite Mobile Ballot Printing Training	1 day				
547		📌	Pollworker Train the Trainer	1 day				
548		📌	Election Day Rover Training	0.5 days				
549		📌	Poll Pad Pollworker Training	1 day				
550		📌	**Regional Training 12**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**		
551		📌	D-Suite Accumulation only EMS Training	2 days				
552		📌	D-Suite Results Tally & Reporting	1 day				
553		📌	D-Suite ICP Training	1 day				
554		📌	D-Suite ICX Training	1 day				
555		📌	D-Suite ICC & Adjudication Training	1 day				
556		📌	D-Suite UOCAVA Training	1 day				
557		📌	D-Suite Mobile Ballot Printing Training	1 day				
558		📌	Pollworker Train the Trainer	1 day				
559		📌	Election Day Rover Training	0.5 days				
560		📌	Poll Pad Pollworker Training	1 day				
561		📌	**Regional Training 13**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**		
562		📌	D-Suite Accumulation only EMS Training	2 days				
563		📌	D-Suite Results Tally & Reporting	1 day				
564		📌	D-Suite ICP Training	1 day				
565		📌	D-Suite ICX Training	1 day				

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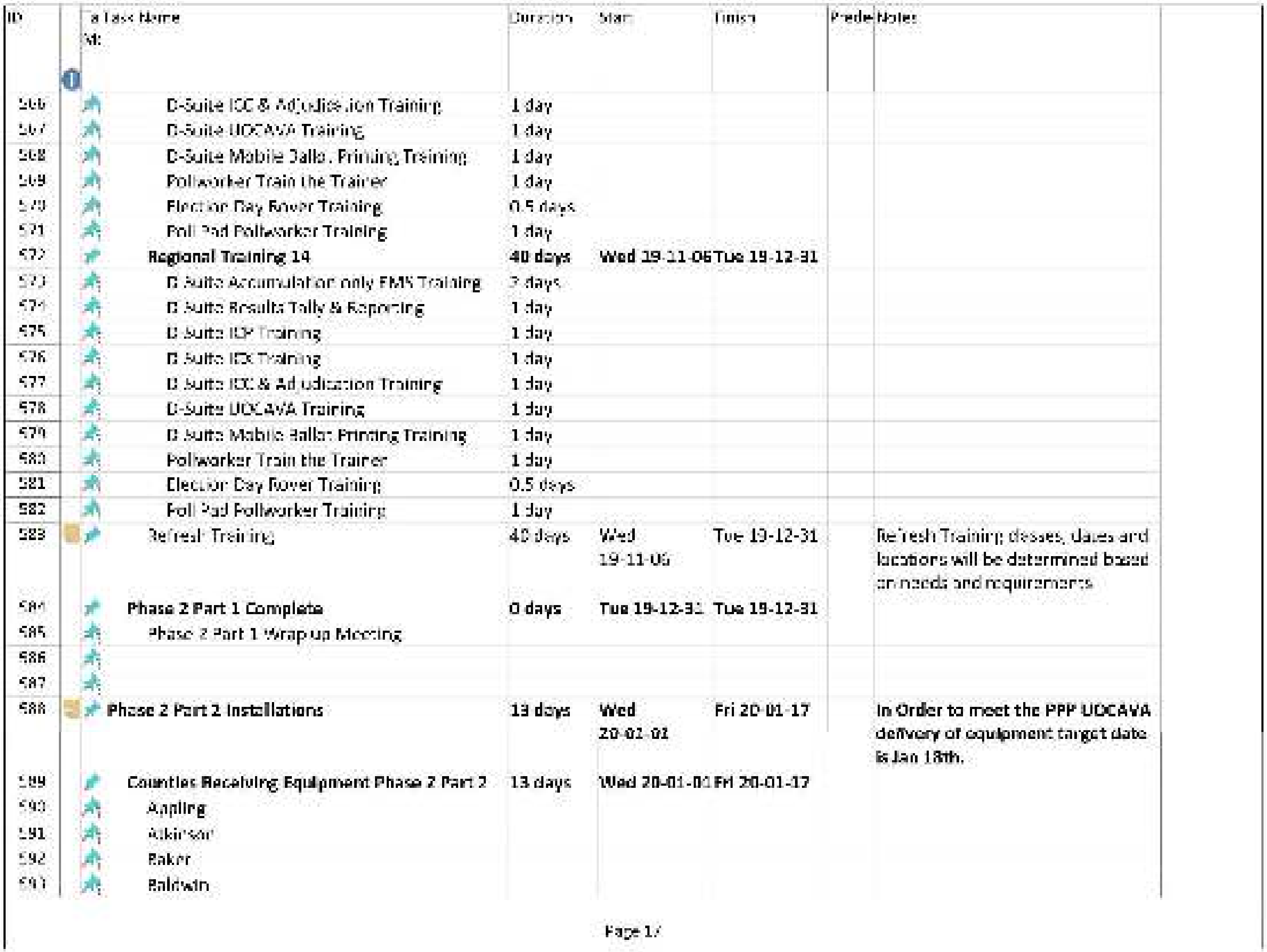

ID		Ta M:	Task Name	Duration	Start	Finish	Prede	Notes
566			D-Suite ICC & Adjudication Training	1 day				
567			D-Suite UOCAVA Training	1 day				
568			D-Suite Mobile Ballot Printing Training	1 day				
569			Pollworker Train the Trainer	1 day				
570			Election Day Rover Training	0.5 days				
571			Poll Pad Pollworker Training	1 day				
572			**Regional Training 14**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**		
573			D-Suite Accumulation only EMS Training	2 days				
574			D-Suite Results Tally & Reporting	1 day				
575			D-Suite ICP Training	1 day				
576			D-Suite ICX Training	1 day				
577			D-Suite ICC & Adjudication Training	1 day				
578			D-Suite UOCAVA Training	1 day				
579			D-Suite Mobile Ballot Printing Training	1 day				
580			Pollworker Train the Trainer	1 day				
581			Election Day Rover Training	0.5 days				
582			Poll Pad Pollworker Training	1 day				
583			Refresh Training	40 days	Wed 19-11-06	Tue 19-12-31		Refresh Training classes, dates and locations will be determined based on needs and requirements
584			**Phase 2 Part 1 Complete**	**0 days**	**Tue 19-12-31**	**Tue 19-12-31**		
585			Phase 2 Part 1 Wrap up Meeting					
586								
587								
588			**Phase 2 Part 2 Installations**	**13 days**	**Wed 20-01-01**	**Fri 20-01-17**		**In Order to meet the PPP UOCAVA delivery of equipment target date is Jan 18th.**
589			**Counties Receiving Equipment Phase 2 Part 2**	**13 days**	**Wed 20-01-01**	**Fri 20-01-17**		
590			Appling					
591			Atkinson					
592			Baker					
593			Baldwin					

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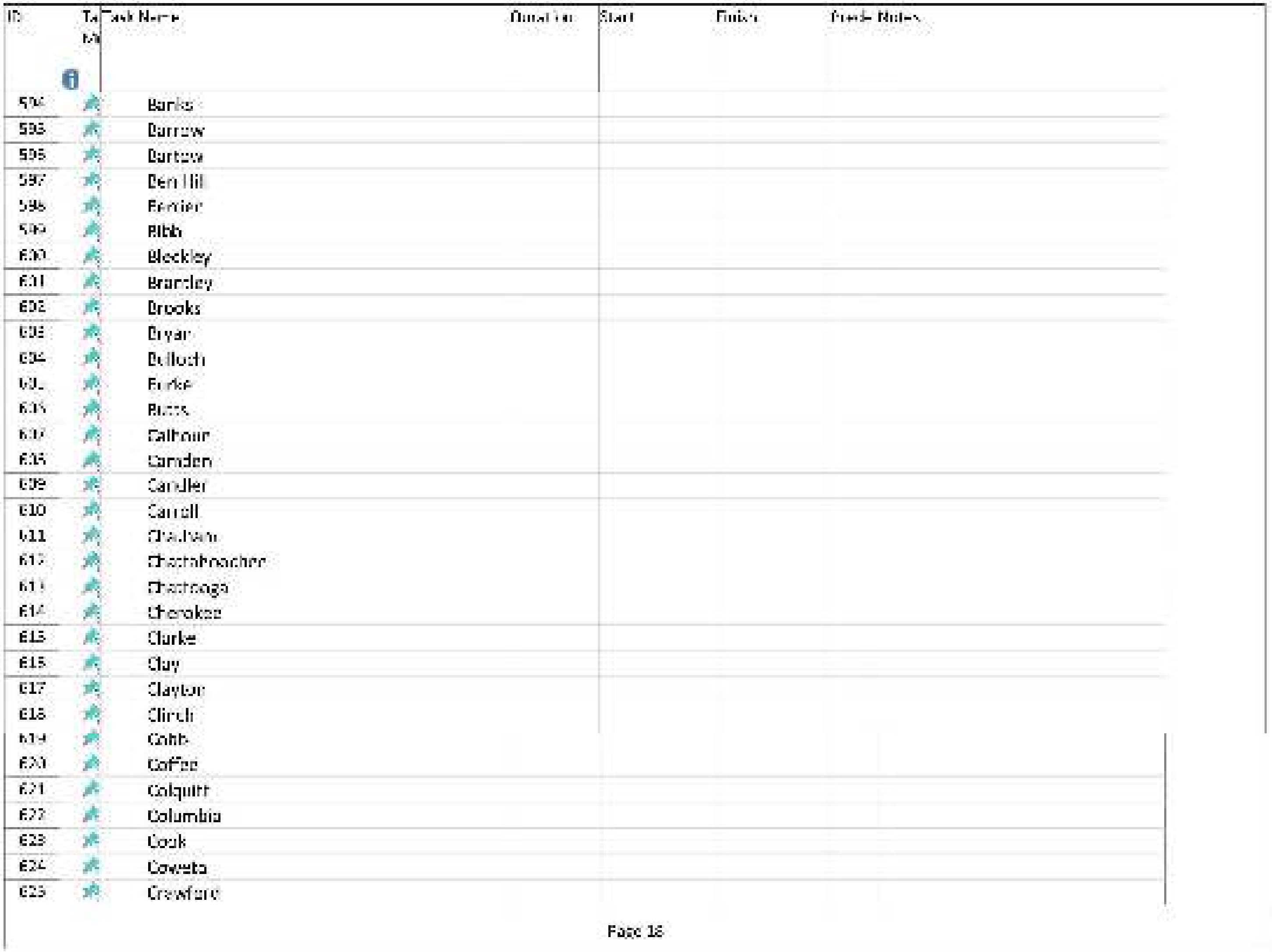

ID	Ta Mo	Task Name	Duration	Start	Finish	Prede	Notes
594		Banks					
595		Barrow					
596		Bartow					
597		Ben Hill					
598		Berrien					
599		Bibb					
600		Bleckley					
601		Brantley					
602		Brooks					
603		Bryan					
604		Bulloch					
605		Burke					
606		Butts					
607		Calhoun					
608		Camden					
609		Candler					
610		Carroll					
611		Chatham					
612		Chattahoochee					
613		Chattooga					
614		Cherokee					
615		Clarke					
616		Clay					
617		Clayton					
618		Clinch					
619		Cobb					
620		Coffee					
621		Colquitt					
622		Columbia					
623		Cook					
624		Coweta					
625		Crawford					

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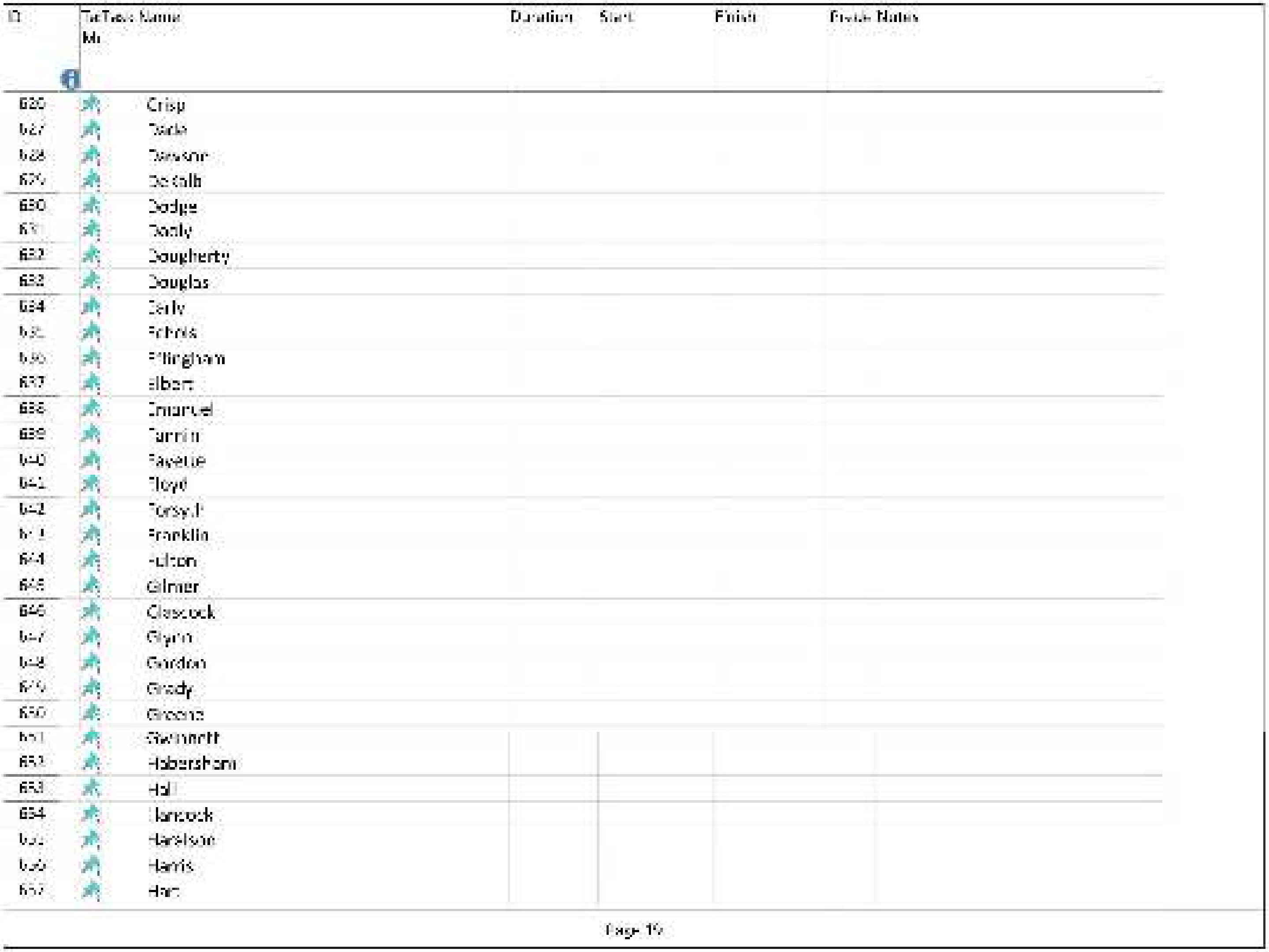

ID	Ta Mo	Task Name	Duration	Start	Finish	Resource Names
626		Crisp				
627		Dade				
628		Dawson				
629		DeKalb				
630		Dodge				
631		Dooly				
632		Dougherty				
633		Douglas				
634		Early				
635		Echols				
636		Effingham				
637		Elbert				
638		Emanuel				
639		Fannin				
640		Fayette				
641		Floyd				
642		Forsyth				
643		Franklin				
644		Fulton				
645		Gilmer				
646		Glascock				
647		Glynn				
648		Gordon				
649		Grady				
650		Greene				
651		Gwinnett				
652		Habersham				
653		Hall				
654		Hancock				
655		Haralson				
656		Harris				
657		Hart				

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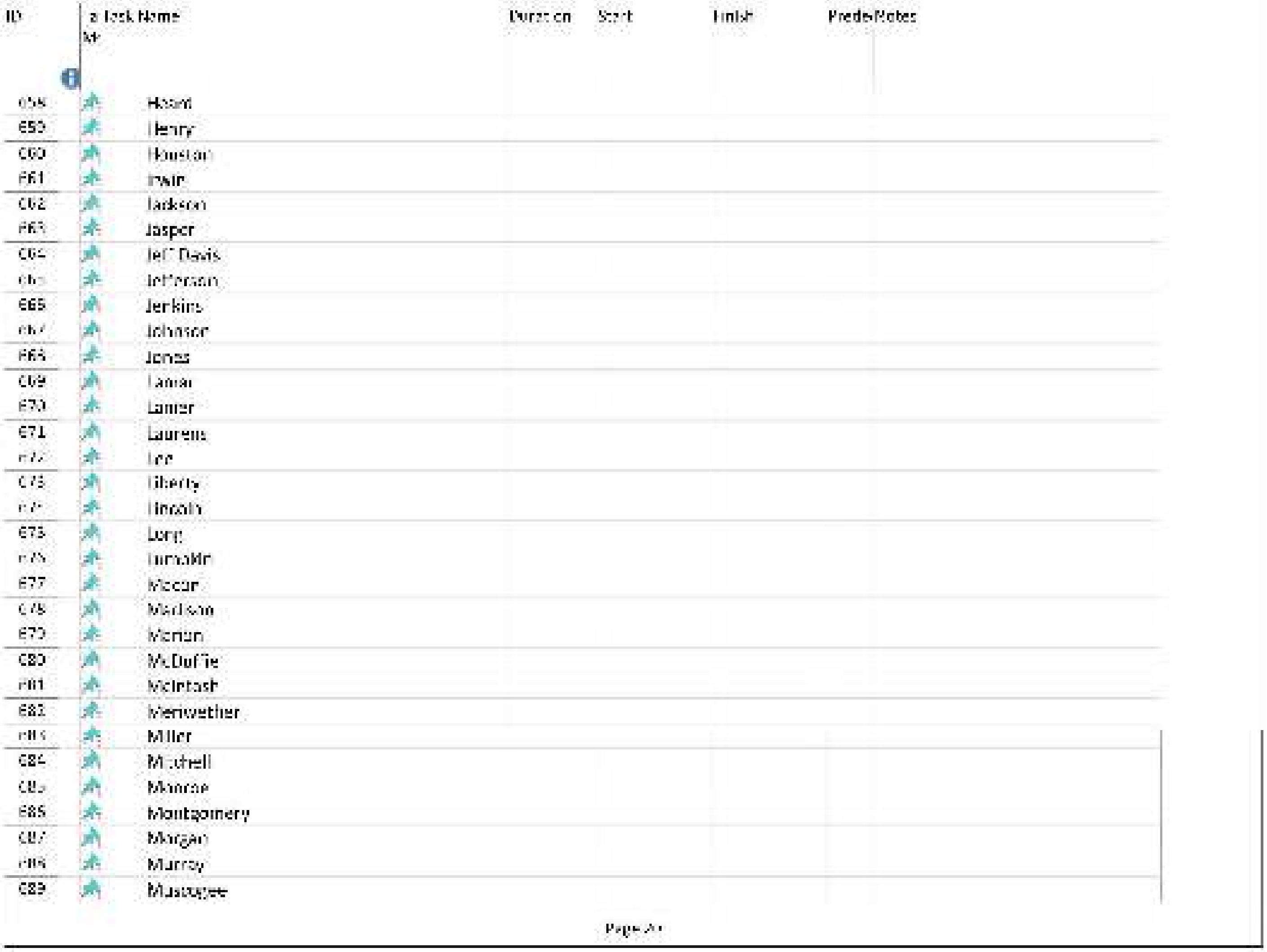

ID	Task Mode	Task Name	Duration	Start	Finish	Prede	Notes
658		Heard					
659		Henry					
660		Houston					
661		Irwin					
662		Jackson					
663		Jasper					
664		Jeff Davis					
665		Jefferson					
666		Jenkins					
667		Johnson					
668		Jones					
669		Lamar					
670		Lanier					
671		Laurens					
672		Lee					
673		Liberty					
674		Lincoln					
675		Long					
676		Lumpkin					
677		Macon					
678		Madison					
679		Marion					
680		McDuffie					
681		McIntosh					
682		Meriwether					
683		Miller					
684		Mitchell					
685		Monroe					
686		Montgomery					
687		Morgan					
688		Murray					
689		Muscogee					

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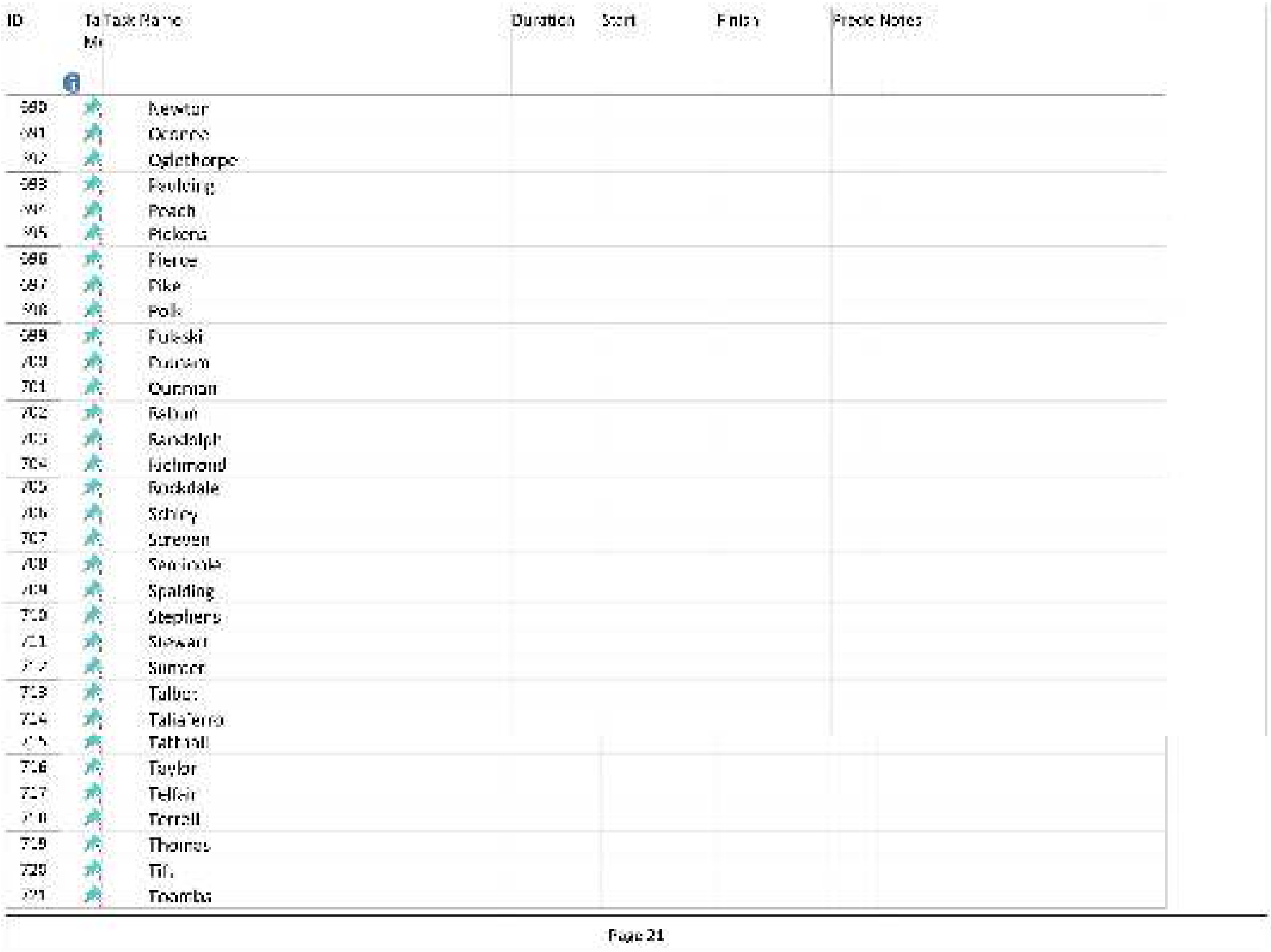
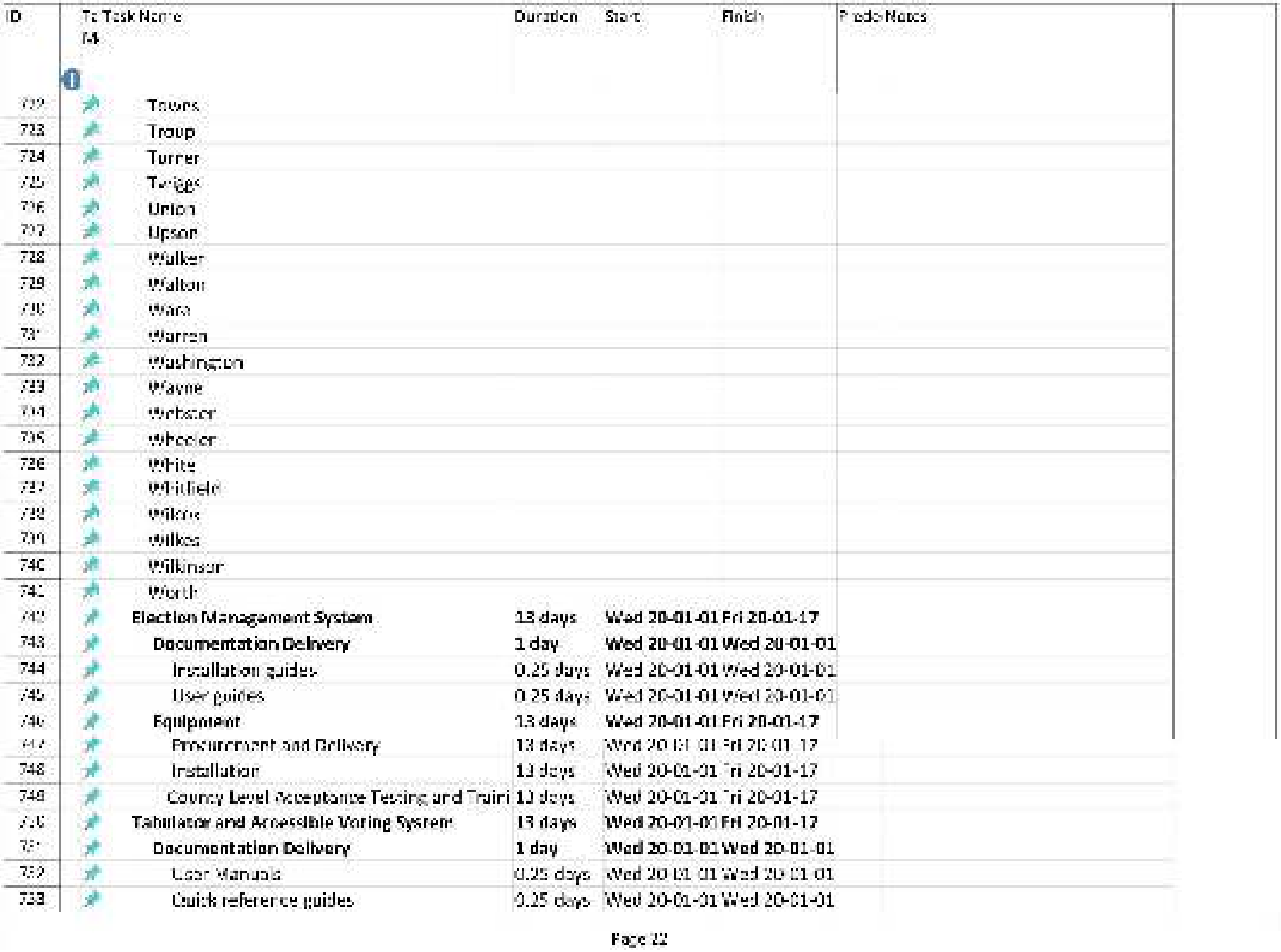


ID	Ta Mo	Task Name	Duration	Start	Finish	Predec	Notes
690		Newton					
691		Oconee					
692		Oglethorpe					
693		Paulding					
694		Peach					
695		Pickens					
696		Pierce					
697		Pike					
698		Polk					
699		Pulaski					
700		Putnam					
701		Quitman					
702		Rabun					
703		Randolph					
704		Richmond					
705		Rockdale					
706		Schley					
707		Screven					
708		Seminole					
709		Spalding					
710		Stephens					
711		Stewart					
712		Sumter					
713		Talbot					
714		Taliaferro					
715		Tattnall					
716		Taylor					
717		Telfair					
718		Terrell					
719		Thomas					
720		Tift					
721		Toombs					



ID	Ta Mo	Task Name	Duration	Start	Finish	Prede	Notes
722	📌	Towns					
723	📌	Troup					
724	📌	Turner					
725	📌	Twiggs					
726	📌	Union					
727	📌	Upson					
728	📌	Walker					
729	📌	Walton					
730	📌	Ware					
731	📌	Warren					
732	📌	Washington					
733	📌	Wayne					
734	📌	Webster					
735	📌	Wheeler					
736	📌	White					
737	📌	Whitfield					
738	📌	Wilcox					
739	📌	Wilkes					
740	📌	Wilkinson					
741	📌	Worth					
742	📌	**Election Management System**	**13 days**	**Wed 20-01-01**	**Fri 20-01-17**		
743	📌	**Documentation Delivery**	**1 day**	**Wed 20-01-01**	**Wed 20-01-01**		
744	📌	Installation guides	0.25 days	Wed 20-01-01	Wed 20-01-01		
745	📌	User guides	0.25 days	Wed 20-01-01	Wed 20-01-01		
746	📌	**Equipment**	**13 days**	**Wed 20-01-01**	**Fri 20-01-17**		
747	📌	Procurement and Delivery	13 days	Wed 20-01-01	Fri 20-01-17		
748	📌	Installation	13 days	Wed 20-01-01	Fri 20-01-17		
749	📌	County Level Acceptance Testing and Traini	13 days	Wed 20-01-01	Fri 20-01-17		
750	📌	**Tabulator and Accessible Voting System**	**13 days**	**Wed 20-01-01**	**Fri 20-01-17**		
751	📌	**Documentation Delivery**	**1 day**	**Wed 20-01-01**	**Wed 20-01-01**		
752	📌	User Manuals	0.25 days	Wed 20-01-01	Wed 20-01-01		
753	📌	Quick reference guides	0.25 days	Wed 20-01-01	Wed 20-01-01		

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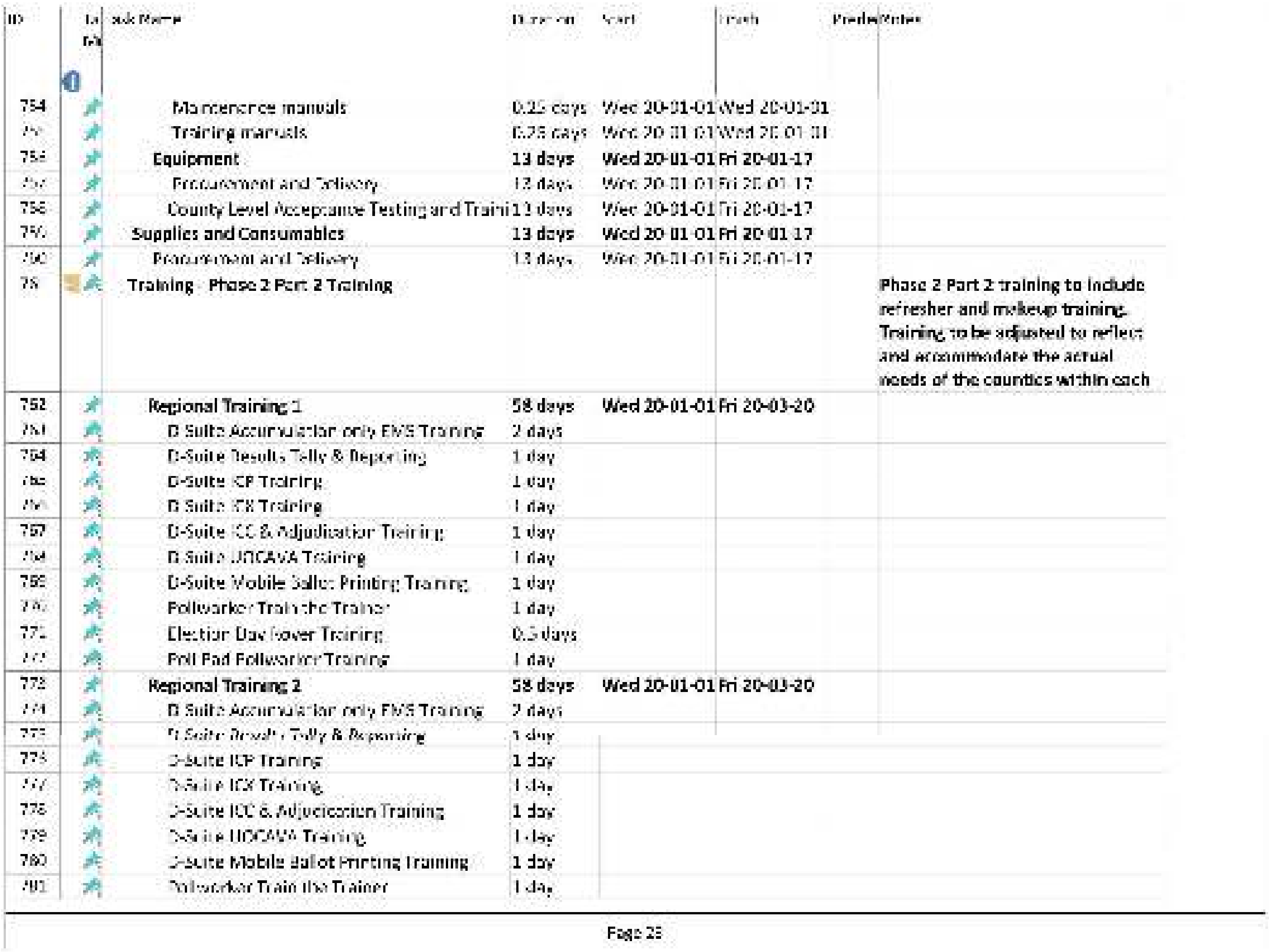

ID	Ta Mo	ask Name	Duration	Start	Finish	Prede	Notes
754		Maintenance manuals	0.25 days	Wed 20-01-01	Wed 20-01-01		
755		Training manuals	0.75 days	Wed 20-01-01	Wed 20-01-01		
756		**Equipment**	**13 days**	**Wed 20-01-01**	**Fri 20-01-17**		
757		Procurement and Delivery	13 days	Wed 20-01-01	Fri 20-01-17		
758		County Level Acceptance Testing and Traini	13 days	Wed 20-01-01	Fri 20-01-17		
759		**Supplies and Consumables**	**13 days**	**Wed 20-01-01**	**Fri 20-01-17**		
760		Procurement and Delivery	13 days	Wed 20-01-01	Fri 20-01-17		
761		**Training - Phase 2 Part 2 Training**					**Phase 2 Part 2 training to include refresher and makeup training. Training to be adjusted to reflect and accommodate the actual needs of the counties within each**
762		**Regional Training 1**	**58 days**	**Wed 20-01-01**	**Fri 20-03-20**		
763		D-Suite Accumulator only EMS Training	2 days				
764		D-Suite Results Tally & Reporting	1 day				
765		D-Suite ICP Training	1 day				
766		D-Suite ICX Training	1 day				
767		D-Suite ICC & Adjudication Training	1 day				
768		D-Suite UOCAVA Training	1 day				
769		D-Suite Mobile Ballot Printing Training	1 day				
770		Pollworker Train the Trainer	1 day				
771		Election Day Rover Training	0.5 days				
772		Poll Pad Pollworker Training	1 day				
773		**Regional Training 2**	**58 days**	**Wed 20-01-01**	**Fri 20-03-20**		
774		D-Suite Accumulator only EMS Training	2 days				
775		*D-Suite Results Tally & Reporting*	1 day				
776		D-Suite ICP Training	1 day				
777		D-Suite ICX Training	1 day				
778		D-Suite ICC & Adjudication Training	1 day				
779		D-Suite UOCAVA Training	1 day				
780		D-Suite Mobile Ballot Printing Training	1 day				
781		Pollworker Train the Trainer	1 day				

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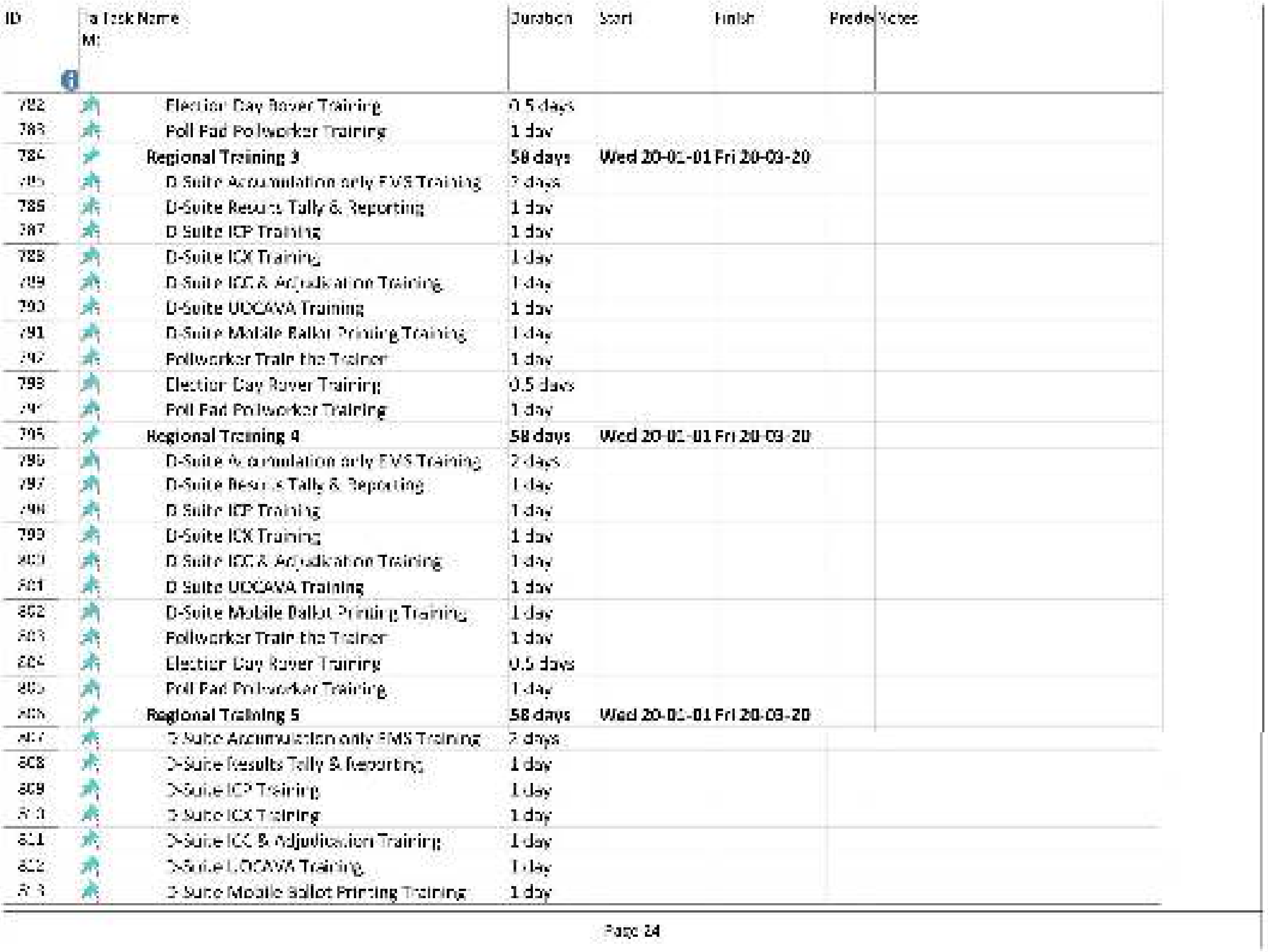
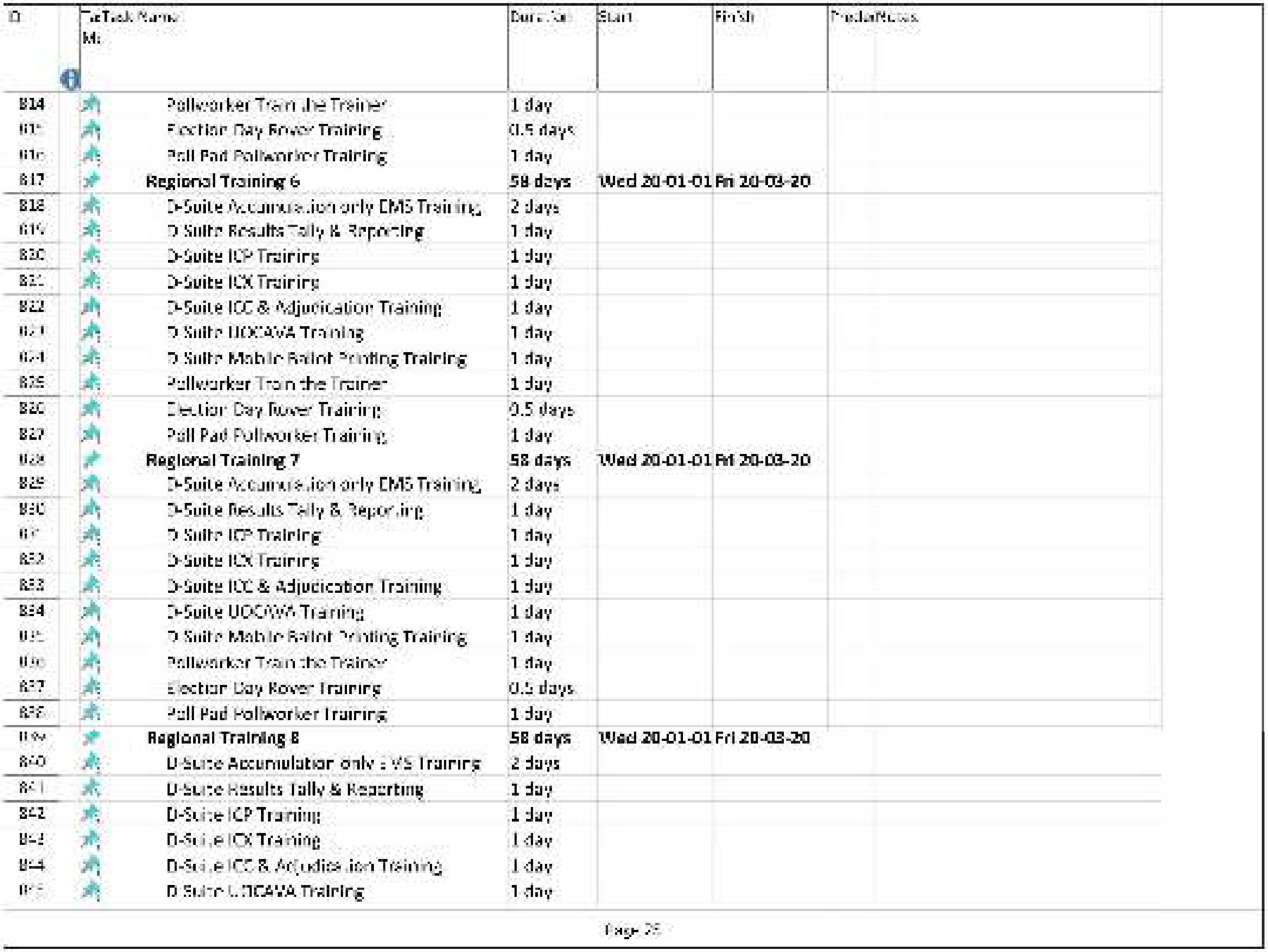


ID	Task Mode	Task Name	Duration	Start	Finish	Prede	Notes
782		Election Day Rover Training	0.5 days				
783		Poll Pad Pollworker Training	1 day				
784		**Regional Training 3**	**58 days**	**Wed 20-01-01**	**Fri 20-03-20**		
785		D-Suite Accumulation only EMS Training	2 days				
786		D-Suite Results Tally & Reporting	1 day				
787		D-Suite ICP Training	1 day				
788		D-Suite ICX Training	1 day				
789		D-Suite ICC & Adjudication Training	1 day				
790		D-Suite UOCAVA Training	1 day				
791		D-Suite Mobile Ballot Printing Training	1 day				
792		Pollworker Train the Trainer	1 day				
793		Election Day Rover Training	0.5 days				
794		Poll Pad Pollworker Training	1 day				
795		**Regional Training 4**	**58 days**	**Wed 20-01-01**	**Fri 20-03-20**		
796		D-Suite Accumulation only EMS Training	2 days				
797		D-Suite Results Tally & Reporting	1 day				
798		D-Suite ICP Training	1 day				
799		D-Suite ICX Training	1 day				
800		D-Suite ICC & Adjudication Training	1 day				
801		D-Suite UOCAVA Training	1 day				
802		D-Suite Mobile Ballot Printing Training	1 day				
803		Pollworker Train the Trainer	1 day				
804		Election Day Rover Training	0.5 days				
805		Poll Pad Pollworker Training	1 day				
806		**Regional Training 5**	**58 days**	**Wed 20-01-01**	**Fri 20-03-20**		
807		D-Suite Accumulation only EMS Training	2 days				
808		D-Suite Results Tally & Reporting	1 day				
809		D-Suite ICP Training	1 day				
810		D-Suite ICX Training	1 day				
811		D-Suite ICC & Adjudication Training	1 day				
812		D-Suite UOCAVA Training	1 day				
813		D-Suite Mobile Ballot Printing Training	1 day				



ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Notes
814		Pollworker Train the Trainer	1 day				
815		Election Day Rover Training	0.5 days				
816		Poll Pad Pollworker Training	1 day				
817		**Regional Training 6**	**58 days**	**Wed 20-01-01**	**Fri 20-03-20**		
818		D-Suite Accumulation only EMS Training	2 days				
819		D-Suite Results Tally & Reporting	1 day				
820		D-Suite ICP Training	1 day				
821		D-Suite ICX Training	1 day				
822		D-Suite ICC & Adjudication Training	1 day				
823		D-Suite UOCAVA Training	1 day				
824		D-Suite Mobile Ballot Printing Training	1 day				
825		Pollworker Train the Trainer	1 day				
826		Election Day Rover Training	0.5 days				
827		Poll Pad Pollworker Training	1 day				
828		**Regional Training 7**	**58 days**	**Wed 20-01-01**	**Fri 20-03-20**		
829		D-Suite Accumulation only EMS Training	2 days				
830		D-Suite Results Tally & Reporting	1 day				
831		D-Suite ICP Training	1 day				
832		D-Suite ICX Training	1 day				
833		D-Suite ICC & Adjudication Training	1 day				
834		D-Suite UOCAVA Training	1 day				
835		D-Suite Mobile Ballot Printing Training	1 day				
836		Pollworker Train the Trainer	1 day				
837		Election Day Rover Training	0.5 days				
838		Poll Pad Pollworker Training	1 day				
839		**Regional Training 8**	**58 days**	**Wed 20-01-01**	**Fri 20-03-20**		
840		D-Suite Accumulation only EMS Training	2 days				
841		D-Suite Results Tally & Reporting	1 day				
842		D-Suite ICP Training	1 day				
843		D-Suite ICX Training	1 day				
844		D-Suite ICC & Adjudication Training	1 day				
845		D-Suite UOCAVA Training	1 day				

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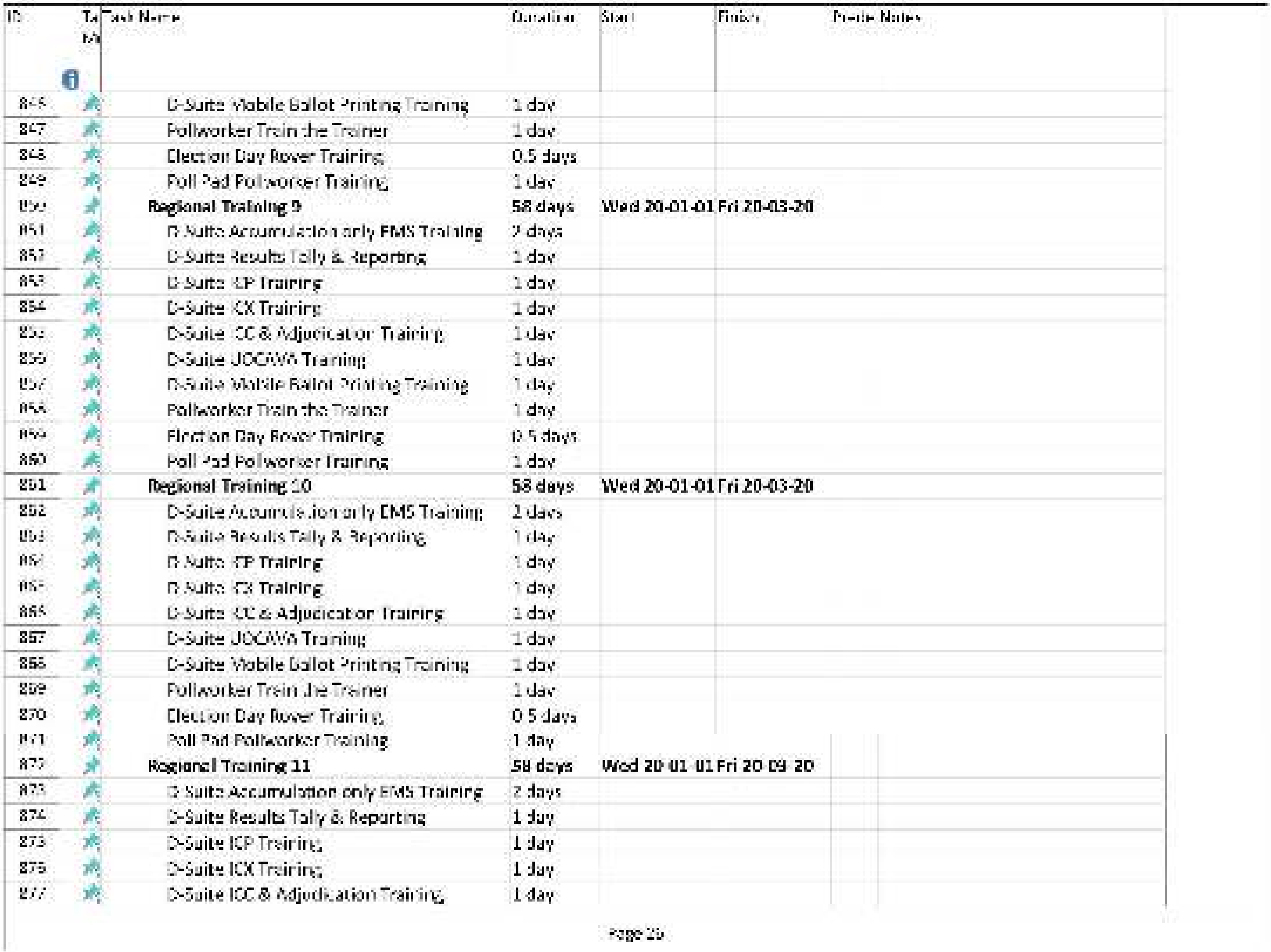

ID	Ta M	Task Name	Duration	Start	Finish	Prede	Notes
846		D-Suite Mobile Ballot Printing Training	1 day				
847		Pollworker Train the Trainer	1 day				
848		Election Day Rover Training	0.5 days				
849		Poll Pad Pollworker Training	1 day				
850		**Regional Training 9**	**58 days**	**Wed 20-01-01**	**Fri 20-03-20**		
851		D-Suite Accumulation only EMS Training	2 days				
852		D-Suite Results Tally & Reporting	1 day				
853		D-Suite ICP Training	1 day				
854		D-Suite ICX Training	1 day				
855		D-Suite ICC & Adjudication Training	1 day				
856		D-Suite UOCAVA Training	1 day				
857		D-Suite Mobile Ballot Printing Training	1 day				
858		Pollworker Train the Trainer	1 day				
859		Election Day Rover Training	0.5 days				
860		Poll Pad Pollworker Training	1 day				
861		**Regional Training 10**	**58 days**	**Wed 20-01-01**	**Fri 20-03-20**		
862		D-Suite Accumulation only EMS Training	2 days				
863		D-Suite Results Tally & Reporting	1 day				
864		D-Suite ICP Training	1 day				
865		D-Suite ICX Training	1 day				
866		D-Suite ICC & Adjudication Training	1 day				
867		D-Suite UOCAVA Training	1 day				
868		D-Suite Mobile Ballot Printing Training	1 day				
869		Pollworker Train the Trainer	1 day				
870		Election Day Rover Training	0.5 days				
871		Poll Pad Pollworker Training	1 day				
872		**Regional Training 11**	**58 days**	**Wed 20-01-01**	**Fri 20-03-20**		
873		D-Suite Accumulation only EMS Training	2 days				
874		D-Suite Results Tally & Reporting	1 day				
875		D-Suite ICP Training	1 day				
876		D-Suite ICX Training	1 day				
877		D-Suite ICC & Adjudication Training	1 day				

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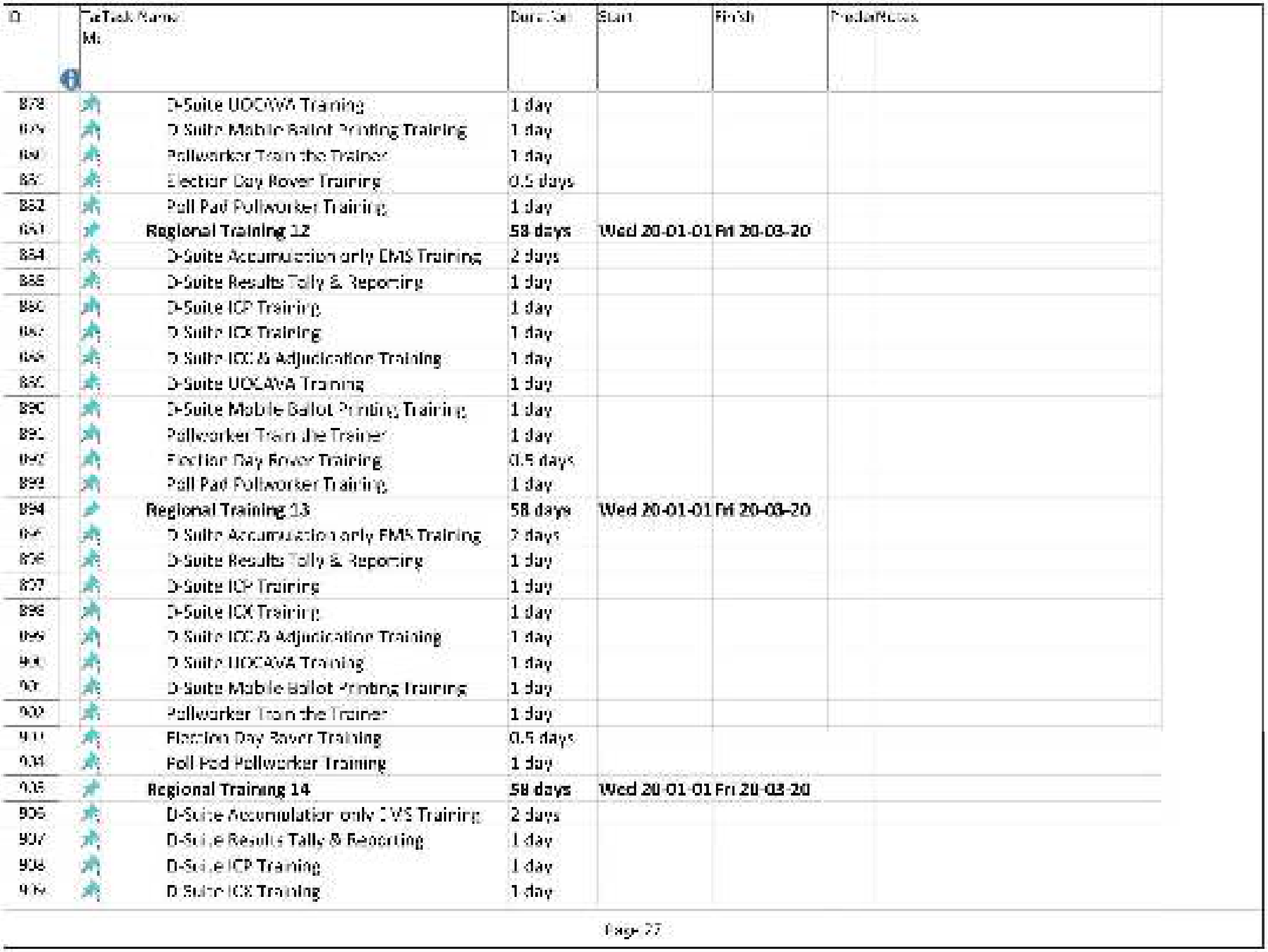
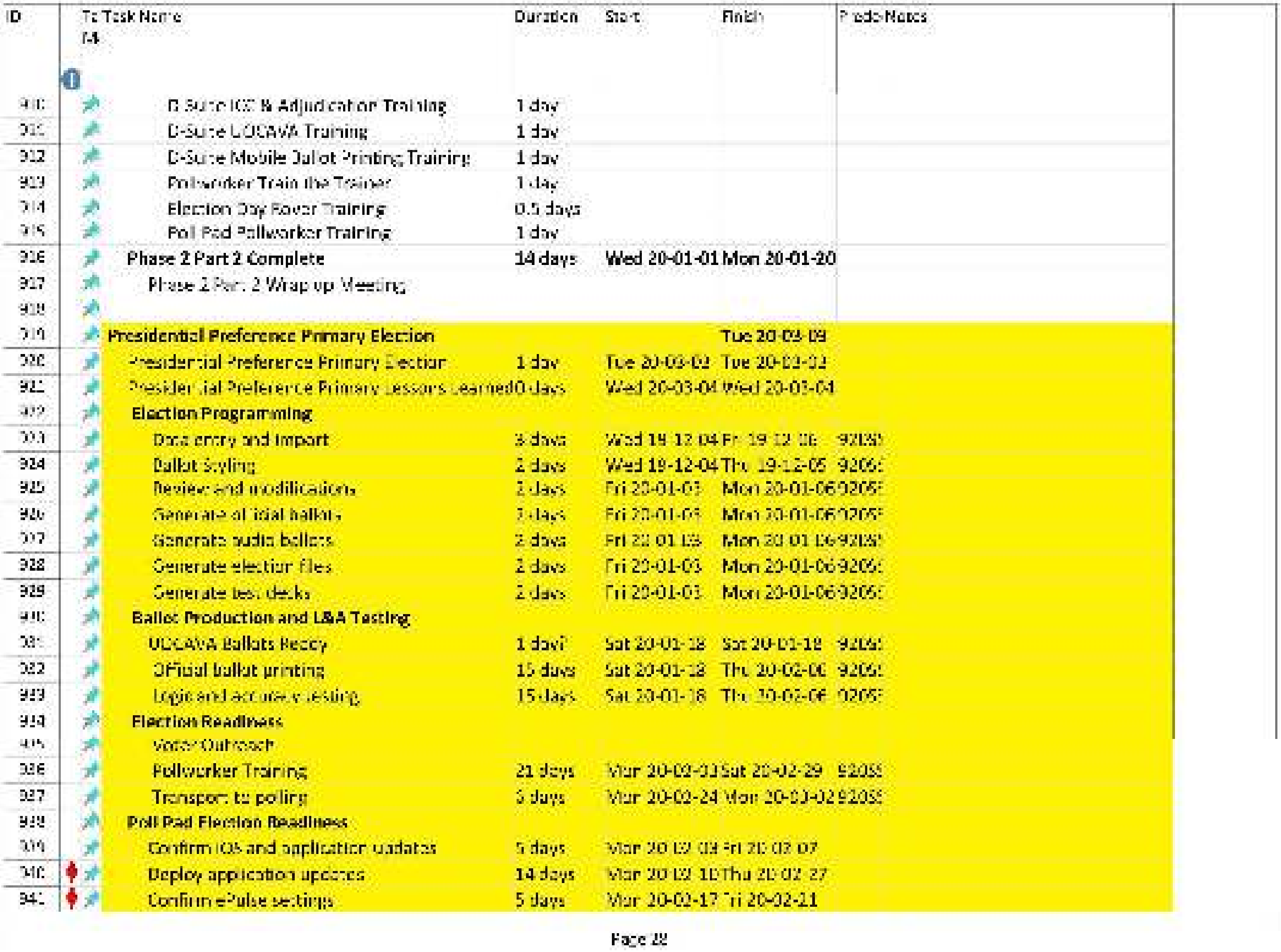


ID	Ta Mo	Task Name	Duration	Start	Finish	Predec	Notes
878		D-Suite UOCAVA Training	1 day				
879		D-Suite Mobile Ballot Printing Training	1 day				
880		Pollworker Train the Trainer	1 day				
881		Election Day Rover Training	0.5 days				
882		Poll Pad Pollworker Training	1 day				
883		**Regional Training 12**	**58 days**	**Wed 20-01-01**	**Fri 20-03-20**		
884		D-Suite Accumulation only EMS Training	2 days				
885		D-Suite Results Tally & Reporting	1 day				
886		D-Suite ICP Training	1 day				
887		D-Suite ICX Training	1 day				
888		D-Suite ICC & Adjudication Training	1 day				
889		D-Suite UOCAVA Training	1 day				
890		D-Suite Mobile Ballot Printing Training	1 day				
891		Pollworker Train the Trainer	1 day				
892		Election Day Rover Training	0.5 days				
893		Poll Pad Pollworker Training	1 day				
894		**Regional Training 13**	**58 days**	**Wed 20-01-01**	**Fri 20-03-20**		
895		D-Suite Accumulation only EMS Training	2 days				
896		D-Suite Results Tally & Reporting	1 day				
897		D-Suite ICP Training	1 day				
898		D-Suite ICX Training	1 day				
899		D-Suite ICC & Adjudication Training	1 day				
900		D-Suite UOCAVA Training	1 day				
901		D-Suite Mobile Ballot Printing Training	1 day				
902		Pollworker Train the Trainer	1 day				
903		Election Day Rover Training	0.5 days				
904		Poll Pad Pollworker Training	1 day				
905		**Regional Training 14**	**58 days**	**Wed 20-01-01**	**Fri 20-03-20**		
906		D-Suite Accumulation only EMS Training	2 days				
907		D-Suite Results Tally & Reporting	1 day				
908		D-Suite ICP Training	1 day				
909		D-Suite ICX Training	1 day				



ID	ℹ	Ta Mo	Task Name	Duration	Start	Finish	Prede	Notes
910		📌	D-Suite ICC & Adjudication Training	1 day				
911		📌	D-Suite UOCAVA Training	1 day				
912		📌	D-Suite Mobile Ballot Printing Training	1 day				
913		📌	Pollworker Train the Trainer	1 day				
914		📌	Election Day Rover Training	0.5 days				
915		📌	Poll Pad Pollworker Training	1 day				
916		📌	**Phase 2 Part 2 Complete**	**14 days**	**Wed 20-01-01**	**Mon 20-01-20**		
917		📌	Phase 2 Part 2 Wrap up Meeting					
918		📌						
919		📌	**Presidential Preference Primary Election**			**Tue 20-03-09**		
920		📌	Presidential Preference Primary Election	1 day	Tue 20-03-02	Tue 20-03-03		
921		📌	Presidential Preference Primary Lessons Learned	0 days	Wed 20-03-04	Wed 20-03-04		
922		📌	**Election Programming**					
923		📌	Data entry and import	3 days	Wed 19-12-04	Fri 19-12-06	9205	
924		📌	Ballot Styling	2 days	Wed 19-12-04	Thu 19-12-05	9206	
925		📌	Review and modifications	2 days	Fri 20-01-03	Mon 20-01-06	9205	
926		📌	Generate official ballots	2 days	Fri 20-01-03	Mon 20-01-06	9205	
927		📌	Generate audio ballots	2 days	Fri 20-01-03	Mon 20-01-06	9205	
928		📌	Generate election files	2 days	Fri 20-01-03	Mon 20-01-06	9206	
929		📌	Generate test decks	2 days	Fri 20-01-03	Mon 20-01-06	9206	
930		📌	**Ballot Production and L&A Testing**					
931		📌	UOCAVA Ballots Ready	1 day?	Sat 20-01-18	Sat 20-01-18	9206	
932		📌	Official ballot printing	15 days	Sat 20-01-18	Thu 20-02-06	9206	
933		📌	Logic and accuracy testing	15 days	Sat 20-01-18	Thu 20-02-06	9205	
934		📌	**Election Readiness**					
935		📌	Voter Outreach					
936		📌	Pollworker Training	21 days	Mon 20-02-03	Sat 20-02-29	9205	
937		📌	Transport to polling	5 days	Mon 20-02-24	Mon 20-03-02	9205	
938		📌	**Poll Pad Election Readiness**					
939		📌	Confirm iOS and application updates	5 days	Mon 20-02-03	Fri 20-02-07		
940	♦	📌	Deploy application updates	14 days	Mon 20-02-10	Thu 20-02-27		
941	♦	📌	Confirm ePulse settings	5 days	Mon 20-02-17	Fri 20-02-21		

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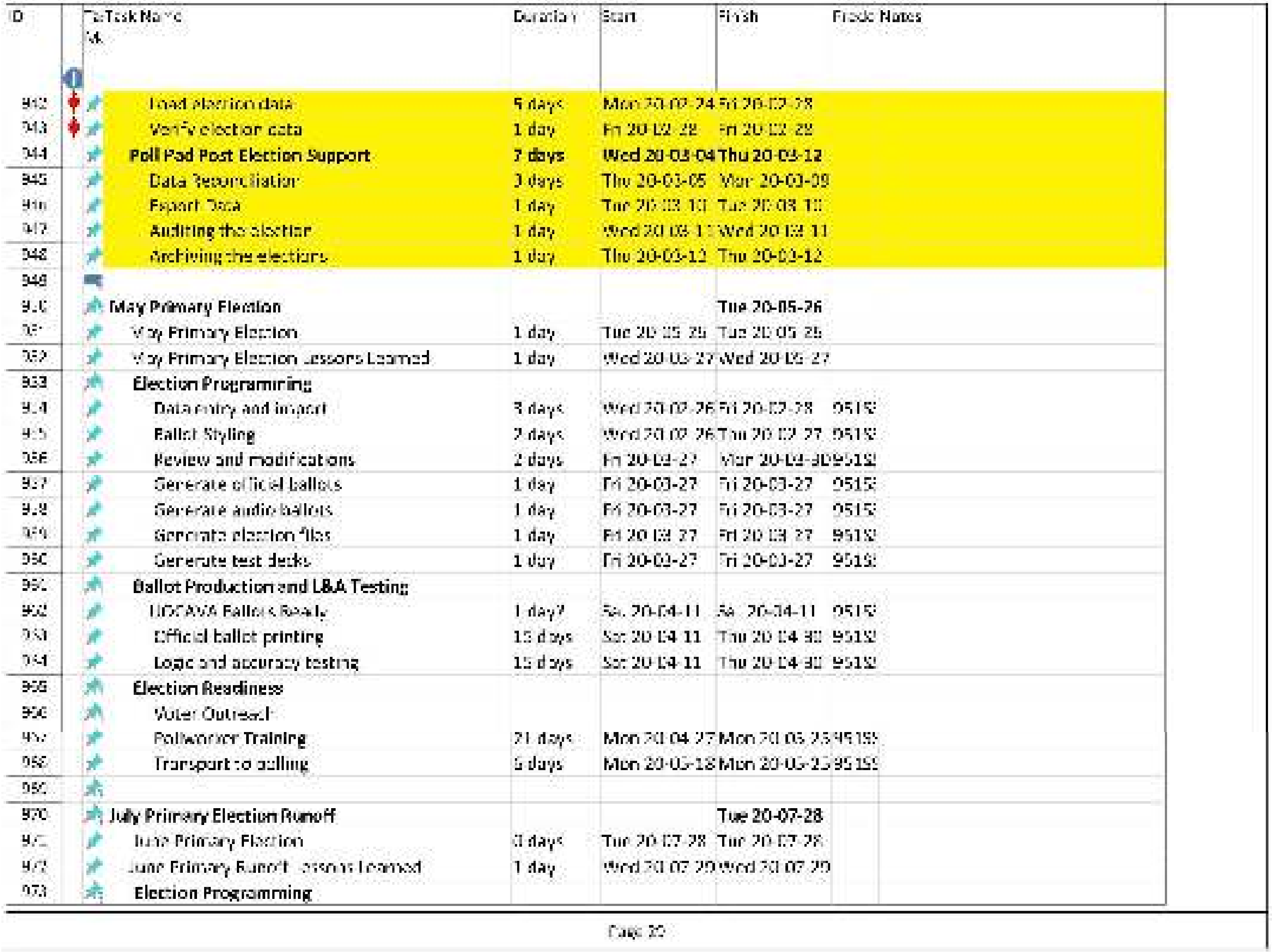

ID	ℹ	Ta Mc	Task Name	Duration	Start	Finish	Predc	Notes
942	◆		Load election data	5 days	Mon 20-02-24	Fri 20-02-28		
943	◆		Verify election data	1 day	Fri 20-02-28	Fri 20-02-28		
944			**Poll Pad Post Election Support**	**7 days**	**Wed 20-03-04**	**Thu 20-03-12**		
945			Data Reconciliation	3 days	Thu 20-03-05	Mon 20-03-09		
946			Export Data	1 day	Tue 20-03-10	Tue 20-03-10		
947			Auditing the election	1 day	Wed 20-03-11	Wed 20-03-11		
948			Archiving the elections	1 day	Thu 20-03-12	Thu 20-03-12		
949								
950			**May Primary Election**			**Tue 20-05-26**		
951			May Primary Election	1 day	Tue 20-05-26	Tue 20-05-26		
952			May Primary Election Lessons Learned	1 day	Wed 20-05-27	Wed 20-05-27		
953			**Election Programming**					
954			Data entry and import	3 days	Wed 20-02-26	Fri 20-02-28	951S	
955			Ballot Styling	2 days	Wed 20-02-26	Thu 20-02-27	951S	
956			Review and modifications	2 days	Fri 20-03-27	Mon 20-03-30	951S	
957			Generate official ballots	1 day	Fri 20-03-27	Fri 20-03-27	951S	
958			Generate audio ballots	1 day	Fri 20-03-27	Fri 20-03-27	951S	
959			Generate election files	1 day	Fri 20-03-27	Fri 20-03-27	951S	
960			Generate test decks	1 day	Fri 20-03-27	Fri 20-03-27	951S	
961			**Ballot Production and L&A Testing**					
962			UOCAVA Ballots Ready	1 day?	Sat 20-04-11	Sat 20-04-11	951S	
963			Official ballot printing	15 days	Sat 20-04-11	Thu 20-04-30	951S	
964			Logic and accuracy testing	15 days	Sat 20-04-11	Thu 20-04-30	951S	
965			**Election Readiness**					
966			Voter Outreach					
967			Pollworker Training	21 days	Mon 20-04-27	Mon 20-05-25	951SS	
968			Transport to polling	5 days	Mon 20-05-18	Mon 20-05-25	951SS	
969								
970			**July Primary Election Runoff**			**Tue 20-07-28**		
971			June Primary Election	0 days	Tue 20-07-28	Tue 20-07-28		
972			June Primary Runoff Lessons Learned	1 day	Wed 20-07-29	Wed 20-07-29		
973			**Election Programming**					

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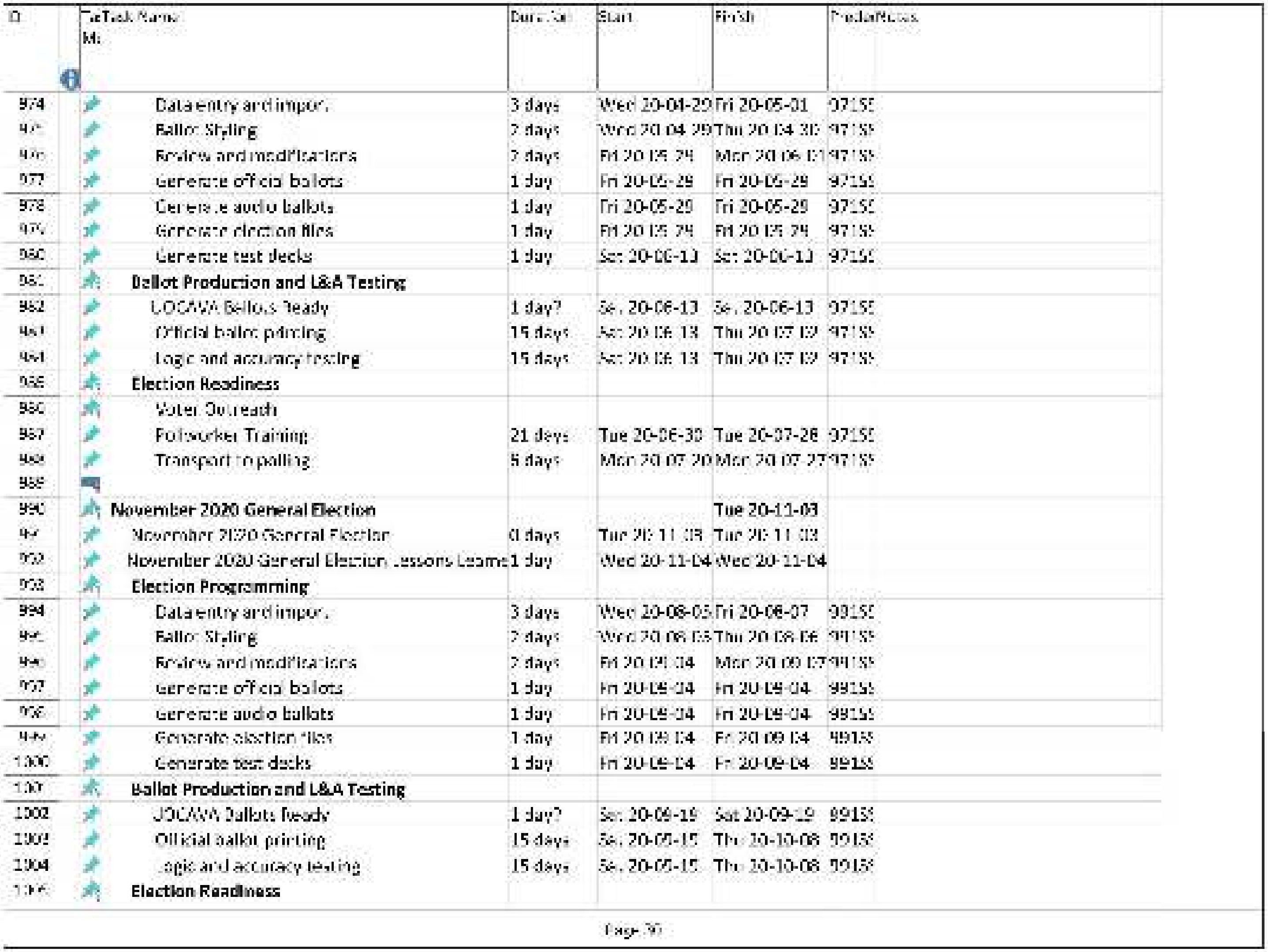

ID	Ta Mo	Task Name	Duration	Start	Finish	Prede	Notes
974		Data entry and import	3 days	Wed 20-04-29	Fri 20-05-01	9715	
975		Ballot Styling	2 days	Wed 20-04-29	Thu 20-04-30	9715	
976		Review and modifications	2 days	Fri 20-05-29	Mon 20-06-01	9715	
977		Generate official ballots	1 day	Fri 20-05-29	Fri 20-05-29	9715	
978		Generate audio ballots	1 day	Fri 20-05-29	Fri 20-05-29	9715	
979		Generate election files	1 day	Fri 20-05-29	Fri 20-05-29	9715	
980		Generate test decks	1 day	Sat 20-06-13	Sat 20-06-13	9715	
981		**Ballot Production and L&A Testing**					
982		UOCAVA Ballots Ready	1 day?	Sat 20-06-13	Sat 20-06-13	9715	
983		Official ballot printing	15 days	Sat 20-06-13	Thu 20-07-02	9715	
984		Logic and accuracy testing	15 days	Sat 20-06-13	Thu 20-07-02	9715	
985		**Election Readiness**					
986		Voter Outreach					
987		Pollworker Training	21 days	Tue 20-06-30	Tue 20-07-28	9715	
988		Transport to polling	5 days	Mon 20-07-20	Mon 20-07-27	9715	
989							
990		**November 2020 General Election**			**Tue 20-11-03**		
991		November 2020 General Election	0 days	Tue 20-11-03	Tue 20-11-03		
992		November 2020 General Election Lessons Learne	1 day	Wed 20-11-04	Wed 20-11-04		
993		**Election Programming**					
994		Data entry and import	3 days	Wed 20-08-05	Fri 20-08-07	9915	
995		Ballot Styling	2 days	Wed 20-08-05	Thu 20-08-06	9915	
996		Review and modifications	2 days	Fri 20-09-04	Mon 20-09-07	9915	
997		Generate official ballots	1 day	Fri 20-09-04	Fri 20-09-04	9915	
998		Generate audio ballots	1 day	Fri 20-09-04	Fri 20-09-04	9915	
999		Generate election files	1 day	Fri 20-09-04	Fri 20-09-04	9915	
1000		Generate test decks	1 day	Fri 20-09-04	Fri 20-09-04	9915	
1001		**Ballot Production and L&A Testing**					
1002		UOCAVA Ballots Ready	1 day?	Sat 20-09-19	Sat 20-09-19	9915	
1003		Official ballot printing	15 days	Sat 20-09-19	Thu 20-10-08	9915	
1004		Logic and accuracy testing	15 days	Sat 20-09-19	Thu 20-10-08	9915	
1005		**Election Readiness**					

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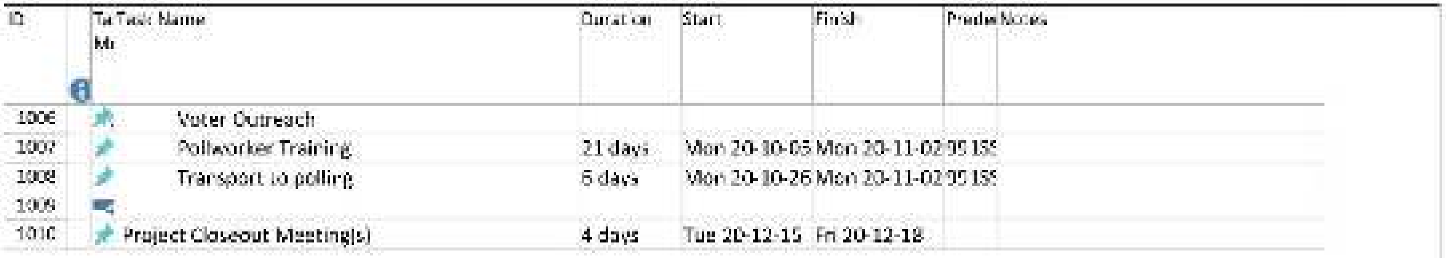


ID	Ta Mc	Task Name	Duration	Start	Finish	Prede	Notes
1006		Voter Outreach					
1007		Pollworker Training	21 days	Mon 20-10-05	Mon 20-11-02	95 15	
1008		Transport to polling	6 days	Mon 20-10-26	Mon 20-11-02	95 15	
1009							
1010		Project Closeout Meeting(s)	4 days	Tue 20-12-15	Fri 20-12-18		

Key Personnel

Identify key employees who will serve as points of contact.

- **Executive Sponsor:** Nicole Nollette, EVP Operations
- **Account Manager:** Barry Herron, Regional Sales Manager, Account Manager
- **State Project Manager:** Jason Frank, Senior Manager, Implementations
- **Operations Project Manager:** Scott Tucker, Customer Relations Manager
- **Implementation Manager:** Tim Baumbach, Senior Manager, Customer Relations Manager
- **Infrastructure Specialist:** Darren Silverburg
- **Infrastructure Specialist Training Specialist:** Cathi Smothers, Director, Election Operations
- **Training Specialist:** Mitch Keddrell, Training Specialist
- **IT & Organizational Security:** Jeremy Holck
- **VP of Governmental Affairs:** Kay Stimson

Identify and provide brief biographies of the staff that would be involved in the implementation of the VSS.

Nicole Nollette – EVP Operations
Nicole Nollette joined Dominion Voting as an Executive Vice President of Operations in June 2016. In this role, she is responsible for the company's system implementations, customer service delivery and fulfillment. Nicole provides executive oversight to all election implementations including Colorado, Michigan, Elections Ontario, and Nevada. Prior to working with Dominion, Nicole Nollette was a Vice President at International Game Technology where she led a team of customer service and implementation specialists globally and led the operational strategic planning. Nicole holds a Bachelor of Science degree from the United State Naval Academy as well as a Master of Business Administration from the Massachusetts Institute of Technology.

Barry Herron – Regional Sales Manager – Dealer Manager, Account Manager
As the Regional Sales Manager, Barry is responsible for all Dominion Voting activities within the State of Georgia. Barry has over 26 years of experience in the elections industry. Barry has studied the process by which jurisdictions deploy voting systems, he understands how counties procure the equipment they need, and the role of the State in elections and voting system implementation. Barry led the sales and implementation effort in Georgia in 2002 as Vice President of Diebold Election Systems. He has expertise in developing election solutions for state and county needs, cultivating partnerships to ensure successful collaboration between the customer and the company.

Jason Frank – Senior Manager, Implementations

Jason served as Implementation Specialist/Project Manager for every new system implementation across numerous counties in Florida – St. Lucie County, Alachua County, Putnam County, Hernando County, and Columbia County – as well as Salem County, New Jersey. He provided support and service for all aspects of the election projects, including technical response and software/hardware implementation, T3 and end user training, RMA management, Election Day support and post-election resolution. In 2005, Jason co-managed Dominion's implementation of voting system hardware that was delivered to Cook County and the City of Chicago, Illinois. More recently, he co-managed the voting system hardware delivery for Puerto Rico in 2016. He continues to support the hardware teams in these jurisdictions.

With over 11 years of experience in the election industry, Jason has provided a range of election support services to jurisdictions across North America and globally. From Product Specialist expertise to implementation management, he has supported projects in California, Colorado, Wisconsin, Nevada, New Jersey, New York, Pennsylvania, New Mexico, Michigan, Ohio, Arizona, Puerto Rico, Mongolia and Canada. Jason has completed the core programs of the Election Center's CERA/CERV Professional Education Program.

Scott Tucker – Customer Relations Manager
As the Customer Relations Manager, Scott is the primary point of contact for the customer and works closely with the regional operations director in planning, organizing, and managing project teams to achieve pre-determined goals.

Scott's election experience started in 2005 working in the state of Ohio for Diebold Elections Systems, Inc. as a Regional Manager and then continued as a National Trainer with the training department. Scott returned to elections with Dominion in 2015 as the Customer Relations Manager for Ohio, Pennsylvania, and Tennessee. Between Scott's elections experience he worked in various roles in the IT industry from Customer Support to IT Management.

Tim Baumbach – Implementation Manager
Tim has over 18 years of experience in the elections industry, starting with Harvard Custom Manufacturing which built the Sequoia Edge I, Edge II and Insight. His works as the senior test technician lead him to support Sequoia's customers in California and Florida during the new installations. In 2002, Tim went to work directly for Sequoia as a product specialist heading up the repair center to support a growing customer base throughout the US. In 2005 he was promoted to Senior Product Specialist to lead the installation process in the city of Chicago and Cook County, IL. This work included tracking and coordinating deliveries on over 15,000 pieces of equipment. Writing procedures with checkoff sheets then training customers on maintenance procedures, election preparation procedures and post elections procedures. Since then he has led similar new installations in San Francisco, New York, Nevada, Mongolia, and Michigan. Prior to working in the election industry Tim served in the Navy as Nuclear Electronics Technician on board the USS Enterprise, Georgia and Arkansas.

Darren Silverburg - Infrastructure Specialist

Darren has gained experience as an Implementation Specialist, through his time supporting new system implementations across various counties in Florida – St. Lucie County, Alachua County, Putnam County, Hernando County, and Columbia County – as well as in Salem County, New Jersey, Chicago, Illinois, and the State of New Mexico. He provided support and service for all aspects of the election projects, including technical response and software/hardware implementation, T3 training, Election Production, Election Day support and post-election resolution. Today, Darren is responsible for Election Production and general support for the many counties currently using Dominion's Democracy Suite system. He has also been closely involved in the certification effort on both software and hardware components, and has extensive knowledge of server installations, and networking and data transmission requirements. With over 10 years of experience in the election industry, Darren has provided a range of election support services to jurisdictions across North America. He has supported projects in California, Colorado, Nevada, New Jersey, New York, Pennsylvania, New Mexico, Ohio, and Canada.

Cathi Smothers – Training Specialist

Cathi has over 30 years of experience in elections. Cathi served as Deputy Registrar for the Hamilton County, Tennessee Election Commission for nineteen years before joining the original Global Election Systems' team in 2000. Since that time, she has supported many new system implementations and provided a full range of election support for customers in twenty states. Cathi is also classified as a senior technical specialist. Cathi has also been a member of the Project Lead Teams for the Delaware, Georgia, Maryland, Mississippi, and New Mexico statewide voting system installations. Cathi is currently holds a CERV certification (Certified Elections/Registration Vendor) through the Election Center's CERA/CERV Professional Education Program.

Mitch Keddrell – Training Specialist

Mitch has more than 10 years of election system support and implementation experience that includes assistance with statewide voting systems implementations and working with voting jurisdictions of all sizes across the United States. In his 10 years working with elections, he has managed and executed responsibilities involved with many aspects of voting system implementations and operations.

Jeremy Holck - IT & Organizational Security

Jeremy has over 20 years of experience working in IT for midsize and large enterprises and as a managed services provider. Jeremy has led groups providing operational support, build and engineering, product development, and security services. Jeremy has provided support for emergency 911 critical infrastructure services, Cloud Infrastructure as a Service solutions, and on-premise IT. Today, Jeremy is responsible for all aspects of Information Technology and support our Engineering, Operations, and Online systems. In addition, Jeremy leads our Security initiatives which include Cyber defense, User Training, and Physical security.

Kay Stimson – VP, Governmental Affairs
KAY has more than 20 years of experience working with U.S. election officials and media. As Dominion's Vice-President for Government Affairs, she serves as the company's public affairs liaison to federal and state government agencies. She is also the media spokesperson for the company. Prior to joining the Dominion team, Kay spent 17+ years representing the National Association of Secretaries of State (NASS), the oldest professional association for state government officials in the U.S. In this role, she oversaw communications and programming outreach to 54 state and territorial member offices, 100+ media outlets and multiple federal entities, including the U.S. Election Assistance Commission, Congress and the White House. Kay has worked on a number of major election initiatives in the U.S., including the creation and passage of the Help America Vote Act of 2002, the initial formation of the U.S. Election Assistance Commission and oversight of government outreach for the 2005 Commission on Federal Election Reform.

Our Subcontractor/Partners

Diversified Technologies
Diversified Technologies, LLC has provided knowledge based, high quality, and cost-effective outsourcing solutions for the Information Technology industry since 2004. As consultants and systems integrators, Diversified Technologies provides engineering, information technology, facility services, and project/ program management to Federal Government, State and Local Government Entities, and major private sector companies. DT provides solutions to clients through effective, efficient, and premier management. Through our quality tools and resources, we deliver exceptional cost-effective and cost-efficient services to our clients as we strive to achieve optimal customer satisfaction. Customer satisfaction is upheld in our highest regards, and we find value in personalizing and customizing customer experiences. Our executive team has over 30 years of combined experience.

Since 2004, we have developed an exceptional compliment of employees and consultants which has allowed us to implement our services to top-tier companies across the country. We are proud to say that we have proven ourselves to our clients, partners, associates, and peers over the years, which is what drives them back to us regularly. Our growth and successful momentum is on predicated trained project resources and skilled management which is supported by an owner to who remains intimately involved with our daily operations.

DT provides services for statewide deployments of large scale, turnkey technology solutions. Our experience resources include project management, technical leads, supervisors, technicians (servers, scanners, and ballot markers), installers, and warehouse personnel.

DT provided significant resources for two of the largest rollouts in Georgia:

- 20,000 workstations and 1,000 servers across the State of Georgia as part of a Y2K remediation program. Covered all 159 counties.
- 22,000 electronic voting machines in the State of Georgia. Provided training and Election Day coverage. Covered all 159 counties.
- Technical support and training for Poll Workers for Fulton County two consecutive years following the initial Diebold rollout.

From these experiences we have developed processes to ensure that your equipment is installed, inspected and accepted efficiently by the customer. Our methods are designed to result in cost effective, quality solutions for you.

- Receiving and Storing
  - Inspect quality of goods received
  - Manage Inventory
  - Provide storage support
  - Manage RMAs
- Staging and Testing
  - Unpacking
  - Setup
  - Testing
  - Tagging and documentation
  - Re-packing
- Installation
  - Configuration
  - Networking
  - Data Migration

DT has experience covering all 159 counties in the State of Georgia. We're located centrally in Atlanta and have access to resources in all parts of the State. During our previous statewide rollouts, DT set up regional teams across the State responsible for sets of counties. DT provided training for implementation teams, election-day support staff, and county staff.

EasyVote
EasyVote Solutions, based in Atlanta, GA is a leading provider of election management software to election offices across the United States. In cooperation with city, county, and state election offices across the United States, EasyVote ensures its products deliver the features that election offices require, based on state-of-the-art technology, and providing responsive and helpful customer support. Key EasyVote personnel that will work closely with Dominion include:

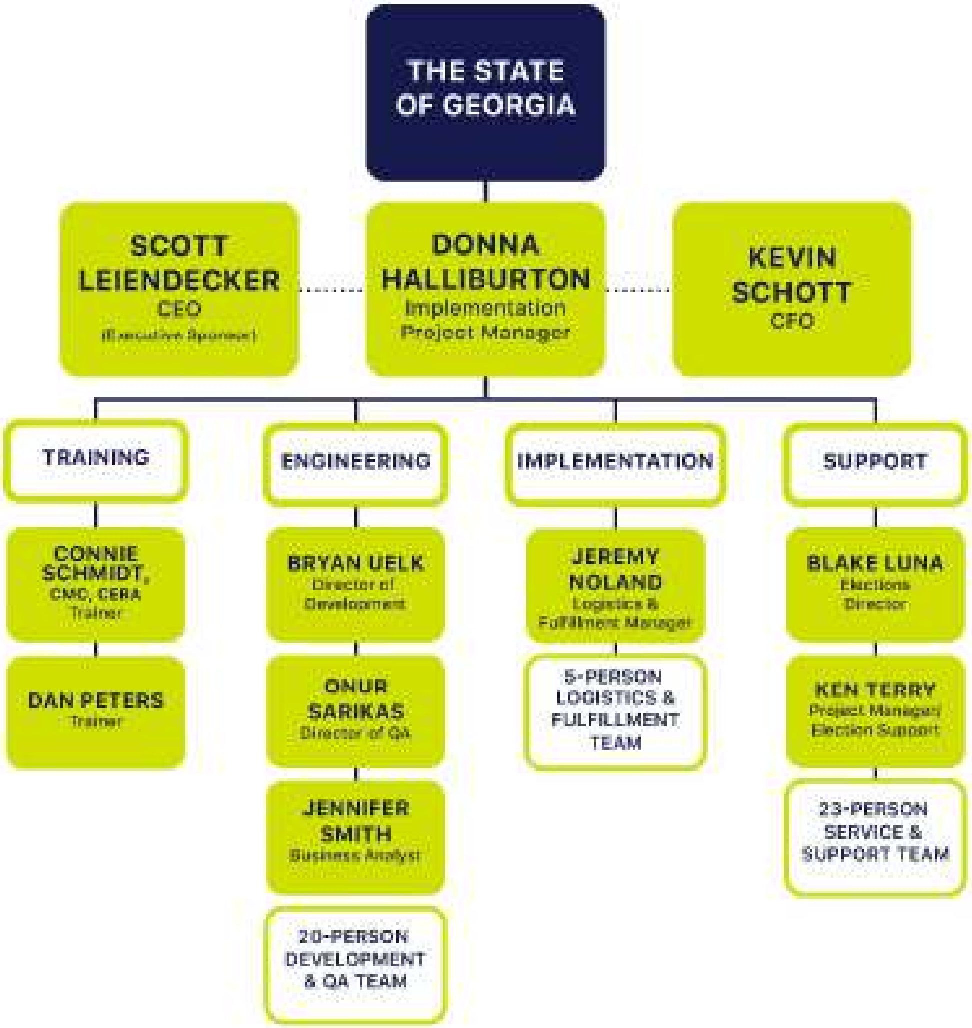
Sandy Phillips – Director of Implementation and Support
Sandy joined the EasyVote team after serving as Elections Supervisor for Franklin County, Georgia. Sandy brings to the team her expertise in the Elections Office, along

with her 20+ years of technology experience. She has 20+ years of training and implementation experience with government and education. Sandy is responsible for installation, training and support of all EasyVote modules.

Greg Whiten - Account Manager
Greg possesses 25+ years of programming, analysis, training and implementation experience with government and private sector. Prior to joining EasyVote, Greg was an Elections Technology Director in Elections Division for the Georgia Secretary of State. He is responsible for sales, installation, training and support of all EasyVote modules.

KNOWiNK

The proposed team for the State of Georgia's ePollbook implementation is provided below.



Project Methodology

Project Management

KNOWiNK will provide a Project Manager to manage all KNOWiNK activities. The client will provide oversight of the project. KNOWiNK will conduct meetings such as steering committee meetings, status and other meetings as directed by the client.

KNOWiNK and the client will conduct a kick off meeting within 10 days of contract signature.

KNOWiNK will create and update project documentation such as Issues Log, Risk Management Plan and Communication Plan. KNOWiNK will create a detailed project plan and resource schedule reviewed and approved by the client. The plan will be routinely updated to reflect changes in schedule subject to approval by the client.

KNOWiNK will provide weekly status updates to client on an agreed upon schedule, reporting accomplishments and activities planned for the upcoming period. Status of open issues or changes to the project timeline.

Requirements Gathering:
KNOWiNK will meet with Georgia and counties to customize and reconfigure software needs based on the voter check in workflow.

KNOWiNK's Product Managers will be onsite for the first meeting, then additional workshops will be conducted via virtual web meetings. Subject Matter Experts (SMEs) or process owners from the State and counties are needed to understand the process.

Development
KNOWiNK will conduct requirement gathering meetings to determine what application changes are needed by the State. The first will coincide with the kickoff meeting. During the Development kickoff, we will also determine what is needed to set-up the gateway to work with DFM EIMS. A SME from the State will be required to review the workflow. After that, weekly workshops lasting an hour will be scheduled to close any gaps. After requirements have been documented, KNOWiNK's business analyst will create User Stories, which will be reviewed in the requirements workshops. The development team at KNOWiNK will use these to estimate level of effort and implement changes to the base application. The State's subject matter expert is to provide signoff. The signoff represents that the State agrees that user stories meet the specification of changes.

Testing
The quality assurance (QA) team receives cards which have passed peer-review and test each user story individually. QA testing covers both the individual products and their interoperability. Prior to the deployment of a build or release, a week-long regression plan is performed to ensure that new development is functioning correctly and has not affected existing functionality.

Once QA has approved a card, Business Analysts review the results to ensure they align with the vision outlined in diagrams and flowcharts, and that they satisfy the story described in the card.

The following tests will be performed:

- Smoke
- Sanity
- Integration
- Stress
- Load
- Functional
- User
- Regression
- Releases

ePulse and Security Configuration

ePulse is a secure web-based back-end election management system. All Poll Pads connect to ePulse where voter check-in data is securely transferred via WiFi. ePulse is the dashboard for your election and gives you a view into your Vote Center locations, running in a secure, connected environment. It's also an efficient data research tool to verify your voter registration information.

KNOWiNK's Client Services team will create and configure the GASOS ePulse client. The ePulse client allows the State to administer and monitor their election as a whole.

The Client Services Team will guide the GASOS through the process of set up, execution and post-election.

Network

KNOWiNK's network subject matter expert will work with the State's network team to develop a deployment strategy.

KNOWiNK's network engineer will make an onsite visit to work with the State's network team to install and configure the access points in the State's warehouse. KNOWiNK will confirm connectivity at the Vote Center locations. KNOWiNK uses Meraki's MDM (mobile device management) to manage each Poll Pad device and has the ability to geolocate, disable, wipe and lock any Poll Pad that may contain sensitive or confidential voter information. All Poll Pads are pre-enrolled in the Meraki MDM prior to shipment to the State.

Documentation

KNOWiNK will provide the State with an administrator and user guide in PDF format. Documentation includes:

- Poll Pad Training Guide
- Poll Pad Troubleshooting Guide
- Printer Troubleshooting Guide
- Poll Pad Opening Checklist

- Poll Pad Closing Checklist
- Poll Pad Administrator Operation Guide
- Pre-Deployment Checklist

Use of external resources

The only external resources KNOWiNK plans to use in the implementation of the Poll Pad ePollbook is Dominion Voting. KNOWiNK and Dominion will look for efficiencies in the SVS implementation to share resources where possible to provide maximum value to the State. For example, we propose cross-training all Dominion and KNOWiNK on-site support personnel in the use and troubleshooting of both the Dominion Voting system and the Poll Pad ePollbook system so that either resource can provide support to poll workers and election officials on Election Day.

Work History of Proposed Resources

The proposed team for Georgia's ePollbook implementation will be led by experienced IT project manager Donna Halliburton. Since joining KNOWiNK in July 2018, Donna has managed the implementations of Poll Pad for the following jurisdictions:

- The City of Winnipeg
- The Commonwealth of Australia (Pilot)
- The County of Los Angeles, California
- The City of Philadelphia, Pennsylvania

Resumes and work history for the other proposed KNOWiNK team members are attached in 1-1 Org Structure.

Section 12 – Project Management and Program Support

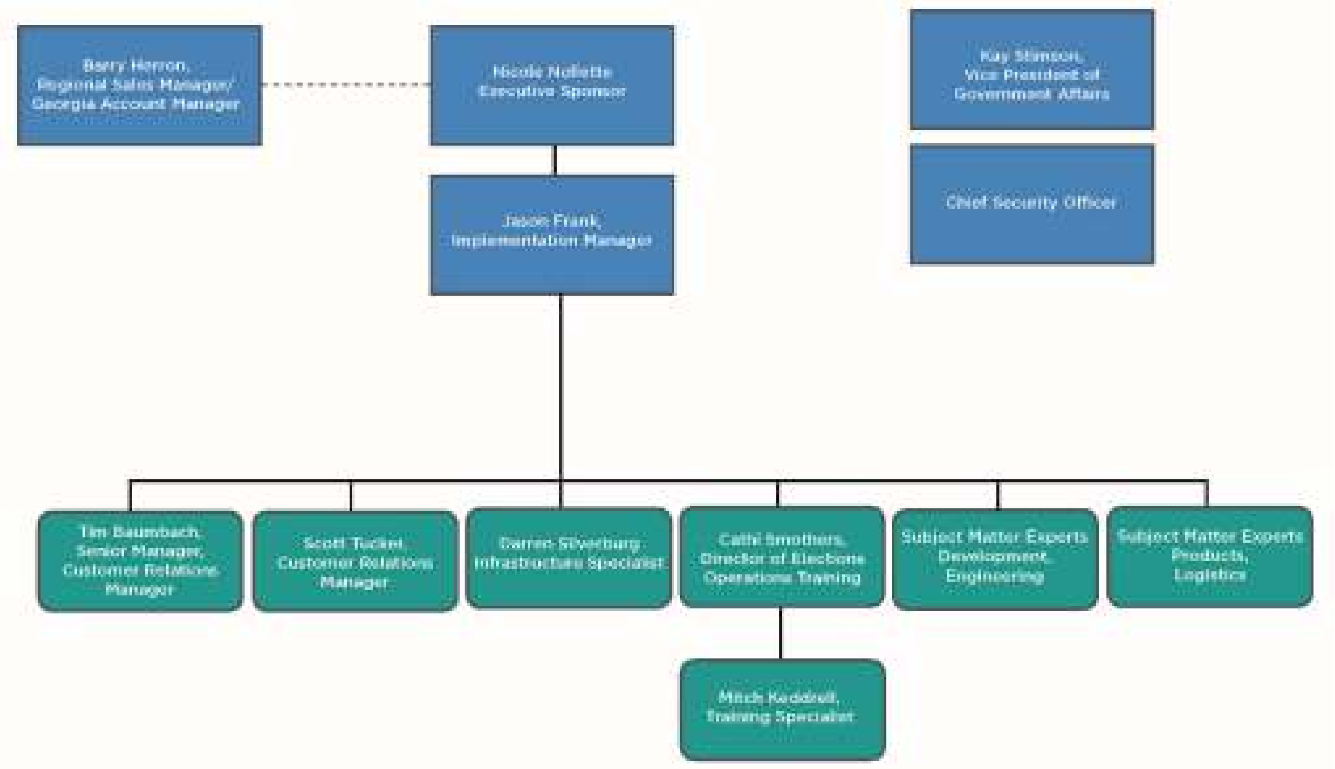
File 12-2 PM Staff

12.2 Provide detailed staffing and project management requirements/organizational structure and time commitments required of GASOS staff. Describe the organizational structure and full time equivalent (FTE) required for each resource.

The Dominion Implementation Plan includes the key staff members from Dominion, but will also include Project Management staff, IT staff, testers and other specifically trained support personnel from a group of Georgia based contractors hired and trained by Dominion experts in their respective assigned duties. Dominion intends to have support personnel reside in Georgia for the length of the contract.

Dominion

Below we provide an organization chart detailing the reporting structure for the project.


Barry Herron,
Regional Sales Manager/
Georgia Account Manager
Nicole Nollette
Executive Sponsor
Kay Stimson,
Vice President of
Government Affairs
Chief Security Officer
Jason Frank,
Implementation Manager
Tim Baumbach,
Senior Manager,
Customer Relations
Manager
Scott Tucker,
Customer Relations
Manager
Darren Silverburg
Infrastructure Specialist
Cathi Smothers,
Director of Elections
Operations Training
Subject Matter Experts
Development,
Engineering
Subject Matter Experts
Products,
Logistics
Mitch Keddrell,
Training Specialist

Key personnel that will provide high level implementation and ongoing support will include the following individuals.

Project Role	**Dominion Resource**	**Project Responsibilities**	**Time Commitment**
Executive Sponsor/ Program Management	Nicole Nollette, Vice President of Operations	• Championing the project • Obtains needed budget approval • Accepting responsibility for problems escalated by project team and Project Manager • Serves as a strong advocate for the project throughout the organization • Manages day-to-day resources	55%
Account Manager	Barry Herron, Regional Sales Manager/Georgia Account Manager	• Project Vision • Communications Liaison • Project Deliverables Oversight	100%
Project Manager	Jason Frank, Implementation Manager	• Manages overall project • Escalates, when needed, risks or issues that could or do impact team performance, project time line, scope, quality, and/or budget.	80%

		• Reports project status and progress. • Creates and maintains project task plan, manages scope and change control processes. • Coordinates tasks among all areas of the organization that are involved or impacted by the project.	
Implementation Manager	Tim Baumbach, Senior Manager, Customer Relations Manager	• Manages Day to date implementation activities • Manages resource task assignments • Manages contract labor as applicable • Tracking and reporting of project plan activities	100%
Operations Project Manager	Scott Tucker, Customer Relations Manager	• Escalates, when needed, risks or issues that could or do impact team performance, project time line, scope, quality, and/or budget. • Coordinates tasks among all areas of the organization that are involved or impacted by the project. • Long term customer support representative	100%

Infrastructure Specialist	Darren Silverburg Infrastructure Specialist	• Document technical project requirements • Responsible for development / test environments, • Responsible for troubleshooting technical issues • Technical liaison between the customer and project team • Provide technical support to the project team	55%
Training Specialists	Cathi Smothers, Director of Elections Operations Training Mitch Keddrell, Training Specialist	• Participation in customer round table events to assess training needs • Development and customization of training plan • Scheduling • Staffing • Training coordination with internal and external staff	Cathi – 20% Mitch – 100%
Security Accountability	Chief Security Officer	• Oversight of key security development and implementation	10%
Legislative Accountability	Kay Stimson, Vice President of Government Affairs	• Oversight of legislative forecasting and impact management	10%

Subject Matter Experts (SMEs)	TBD based on post-implementation needs	• Provide professional expertise related to their discipline including development, engineering, products, logistics. • Provide mentorship to end users (customer), Dominion and KNOWiNK • Participate in ongoing meetings • Support system upgrade and installation activity	100%

KNOWiNK

Knowink estimates the following resources:

Task	Resource Requirement
Weekly status meeting	1 hr/week
Requirements Workshops	20 hours
Testing	40 hours
1st Deployment	20 hours*
2nd Deployment	30 hours*
3rd Deployment	1150 hours*
Training - Pilot	80 hours
Training - Election	160 hours

***Assumptions:**

Calculated using 10min/case to walk through the checklist. This may decrease as resource becomes more familiar with the process

Assuming 1 FTE to perform the acceptance testing

File 12-3 PM Time

12.3 Provide a high-level project plan with timeline to implement a project of this magnitude and demonstrate historical information of similar projects and approach to demonstrate ability to deliver this project on schedule.

Dominion

Below we provide information regarding three similar implementation projects. We would be happy to provide additional information about these examples or other large-scale project that Dominion has implemented throughout the United States. We are confident in our successes and ability to deliver a new modern voting system to the State of Georgia:

Project 1 – Clark County, Nevada

Project 1 Clark County Nevada	
Brief project description:	Clark County transitioned to the Democracy Suite system in early 2015 and are most recently installing the latest in Elections Innovation – the ImageCast X with Voter Verified Paper Audit Trail (VVPAT). In 2004, Dominion worked successfully with the State of Nevada to be the first to implement the Voter Verifiable Paper Audit Trail Printer (VVPAT), and remains the State's partner in election innovation. Clark County and Washoe County, NV transitioned to the Democracy Suite system in early 2015 and 2016 respectively and are currently installing the latest in Elections Innovation – the ImageCast X with Voter Verified Paper Audit Trail (VVPAT). A total

	of 16 NV counties have fully implemented the Democracy Suite system with the ImageCast X and VVPAT.
Application software:	Democracy Suite 5.4 – ImageCast X Prime, VVPAT, ImageCast Central Mail Ballot Workstations and Scanners, EMS Servers, Adjudication Workstations
Customer type:	County
Prime contractor or subcontractor:	Prime
Customer name:	Joe Gloria, Registrar of Voters Clark County, Nevada 965 Trade Drive #1 North Las Vegas, NV 89030-7801 702-455-2846 jpg@co.clark.nv.us
Project Size:	1,118 precincts, 279 polling locations, and 1,119,203 registered voters. 5,000 ImageCast X units are deployed in Clark County. Over 7,000 units are deployed in 16 counties throughout the state of NV.
Project Dates:	Partnership with Clark County began in 1999 and Dominion was named the statewide NV vendor in 2004. Clark County ImageCast X implementation began April 2017 with all units fully accepted February 2018. Washoe County implementation began October 2017 with all units fully accepted February 2018. Implementations for 14 more NV counties were fully completed January-March 2018.

Work performed:	Dominion has provided full Project Management for the implementations in Clark County and throughout the state of Nevada. Dominion has provided resources to install all equipment at the customer location. Training has been provided to all customers at their own site and/or through Regional Trainings held throughout the state in February and March 2018. Dominion has been solely responsible for creating and maintaining policy and procedure manuals and related reference documentation. Resources have guided county staff through Acceptance Testing for all equipment. Resources have been responsible for technical troubleshooting and hardware repairs as necessary. Dominion continues to collaborate and support VOTEC and the integration of their Votesafe E-pollbooks with voter card activation for the ImageCast Prime.
Relevance:	Clark County has been a longstanding partner and cooperative source for exchanging information with toher clients to discuss similarities and ways to improve. Clark County is a great learning tool for Georgia going forward, especially for larger counties in Georgia. Nevada being a state system, it will also serve to provide good experience lessons for Georgia.
Technical Environment of the customer:	Operating System: ImageCast X utilizes an Android based operating system. Workstations (EMS/Adjudication/ImageCast Central): Windows 10
On-Going Support:	Dominion has provided in state support for Nevada since 2004. Customer support extends throughout the life on the contract and is a combination of on-site and off-site support. A local, dedicated Customer Relations Manager is available to assist customers with technical, operational and product support.

Project 2 - State of Colorado

Project 2 **State of Colorado**	
Brief project description:	Dominion helped streamline the election process by replacing the voting system at the time (which consisted of three vendors and seven different databases) – with a single database to power the entire election – Democracy Suite. Dominion provided training on all aspects of the system, technical services and support for system installation and configuration, early voting, Election Day voting and post-election activities.
Application software:	Democracy Suite version 5.2. ImageCast X, ImageCast Central, Election Event Designer, Results Tally and Reporting, Mobile Ballot Printing, Adjudication modules.
Customer type:	County
Prime contractor or subcontractor:	Amber McReynolds, Director of Elections 200 W 14th Ave, #100 Denver, CO 80204 720-865-4850 Amber.McReynolds@denvergov.org
Customer name:	State of Colorado

Project Size:	Dominion is the elections provider for 58 of 64 Colorado counties which includes 1,863 precincts and approximately 3.8 million registered voters.
Project Dates:	In 2015, the State of Colorado evaluated four different voting systems piloting elections with Dominion ranking the highest following an independent evaluation. Eighteen Colorado counties successfully made the transition to Democracy Suite in 2016 for both the Primary and General elections. An additional 37 Colorado counties have transitioned to Democracy Suite in 2017 and 2018.
Work performed:	Implemented new elections management system and hardware for 58 of 64 Colorado counties. Work included replacing the current system spread among three vendors with multiple databases with one single database, Democracy Suite. Worked closely with the state elections officials to develop custom training and voter outreach materials, testing procedures, and support all aspects of administering an election project.
Relevance:	The ImageCast X was recently deployed in the State of Colorado as part of their Uniform Voting System initiative, where it received the highest usability ranking by in-person voters with disabilities.
Technical Environment of the customer:	Operating System: Win10 for workstations, Windows Server 2012 for Standard Servers Database: SQL 2012
On-Going Support:	Customer support extends throughout the life on the contract and is a combination of on-site and off-site support. A local, dedicated Customer Relations Manager is available to assist customers with technical, operational and product support.

Project 3 – State of Michigan

Project 3 **State of Michigan**	
Brief project description:	Dominion earned the highest score out of the five major voting system vendors in the statewide RFP. Michigan is a home rule state, meaning each municipality owns and maintains their own voting and EMS equipment. As an example, in Wayne County (Detroit) 42 municipalities and townships individually were implemented with new voting systems. In the State, 65 of the 83 counties selected Dominion for their new voting system using the ImageCast Precinct with 1,970 ImageCast X with Ballot Marking Device (BMD) for standard and ADA voting and ImageCast Central. An additional 400+ ImageCast X units will be deployed in 2018. The service call rate for the ImageCast X deployment was less than 2% and primarily consisted of easily addressed user questions or errors that were resolved by phone.
Application software:	Democracy Suite version 5.0.15.1, ImageCast X 15-inch with BMD, ImageCast Precinct and ImageCast Central. Some municipalities who utilize modem transmission have ImageCast Listener.
Customer type:	Michigan is a home rule state whereas each municipality is its own entity and owns and maintains their own election equipment.

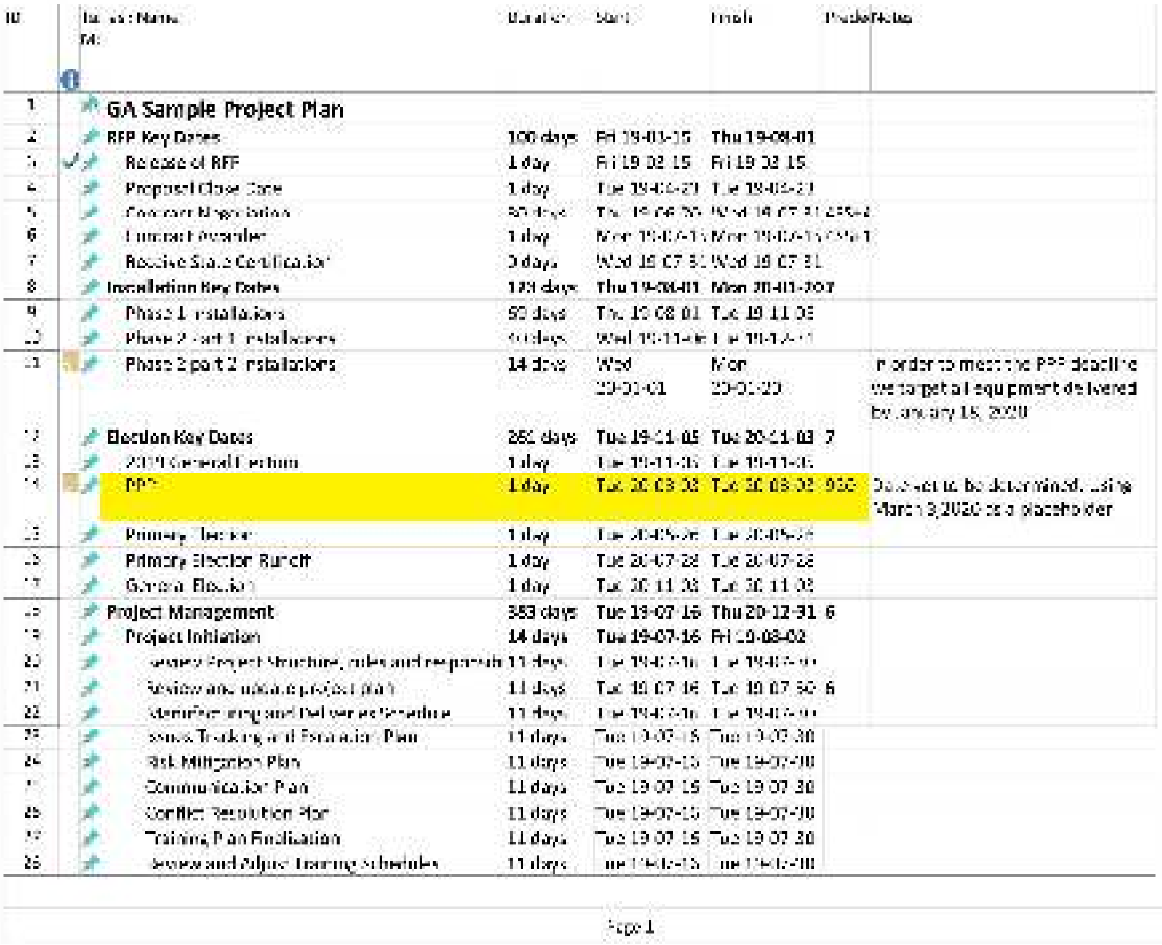
Prime contractor or subcontractor:	Prime
Customer name:	Sally Williams, Director Michigan Bureau of Elections 517-373-2540 WilliamsS1@michigan.gov
Project Size:	In the state of Michigan, 65 of the 83 counties selected Dominion for their new voting system, which includes 4,810 precincts and approximately 7.3 million registered voters.
Project Dates:	Since the statewide evaluation, 65 Michigan counties have contracted with Dominion or our dealer partners to make the transition to Democracy Suite in 2017 and 2018.

Work performed: **(Explain the project and the work performed by your company. If multiple companies participated in the referenced phase/project, each company, prime and sub-contractors, and their roles in the project must be provided.)**	Dominion provided full transition and implementation services on a county by county basis to support the transition to Democracy Suite. Dominion implemented two of the largest jurisdictions: Wayne County (Detroit) with 42 municipalities and townships individually were implemented with new voting systems and Kent County (Grand Rapids) with 31 municipalities and townships. Dominion dealer partners GBS Vote and ElectionSource implemented, or are currently implementing, the remaining 63 counties. Dominion provided training to the dealers, document creation and resources, voting equipment and components, RMA administration and supported dealer efforts. For each county municipality and township were implemented to include the following: • Document creation (manuals) • Quick reference materials • EMS System Configuration and testing • RMA administration • Training • Equipment delivery • Equipment setup & Acceptance • Election support • Election programming • Fielding service calls & Phone support

	- Legacy equipment removal and disposal
Relevance:	The State of Michigan is a statewide procurement, different from Georgia, in that each election jurisdiction selects their provider from the final State selected providers. Dominion received the highest score out of five major voting system vendors by the State of Michigan Joint Evaluation Committee for their statewide RFP. Dominion has been selected by 65 of the 83 jurisdictions. Michigan is similar to Georgia in that they are composed of some very large election jurisdictions and several very small jurisdictions.

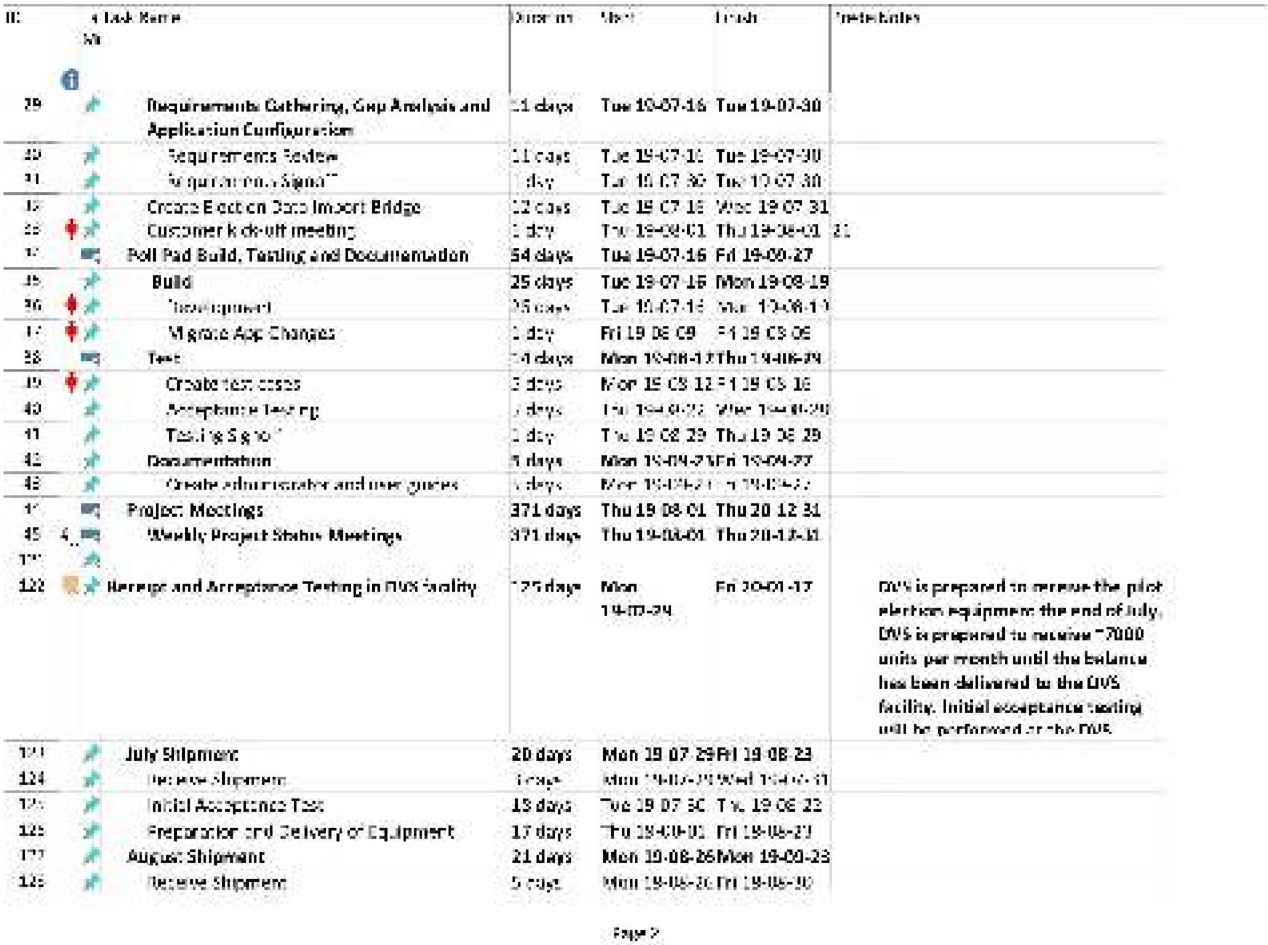
Technical Environment of the customer:	Windows Server 2012R2 Windows SQL Server 2012 Windows 8.1 Workstations
On-Going Support:	Dominion provided onsite implementation support for Wayne and Kent Counties and their jurisdictions. Onsite support for two(2) elections throughout 2017. Off-site support was provided throughout the project and continues now.

The following pages includes a high-level project plan. As with all large-scale implementations, we would look to customize the plan based on our discussions during the initial project planning phase. For additional information, please see our response to File 12-1.



ID	Task Name	Duration	Start	Finish	Predec	Notes
1	**GA Sample Project Plan**					
2	**RFP Key Dates**	100 days	Fri 19-03-15	Thu 19-08-01		
3	✓ Release of RFP	1 day	Fri 19-03-15	Fri 19-03-15		
4	Proposal Close Date	1 day	Tue 19-04-23	Tue 19-04-23		
5	Contract Negotiation	70 days	Thu 19-04-25	Wed 19-07-31	4FS+2	
6	Contract Awarded	1 day	Mon 19-07-15	Mon 19-07-15	[illegible]	
7	Receive State Certification	0 days	Wed 19-07-31	Wed 19-07-31		
8	**Installation Key Dates**	123 days	Thu 19-08-01	Mon 20-01-20		
9	Phase 1 installations	69 days	Thu 19-08-01	Tue 19-11-05		
10	Phase 2 part 1 installations	40 days	Wed 19-11-06	Tue 19-12-31		
11	Phase 2 part 2 installations	14 days	Wed 20-01-01	Mon 20-01-20		In order to meet the RFP deadline we target all equipment delivered by January 15, 2020
12	**Election Key Dates**	261 days	Tue 19-11-05	Tue 20-11-03	7	
13	2019 General Election	1 day	Tue 19-11-05	Tue 19-11-05		
14	PPP	1 day	Tue 20-03-03	Tue 20-03-03	[illegible]	Date set to be determined. Using March 3,2020 as a placeholder
15	Primary Election	1 day	Tue 20-05-26	Tue 20-05-26		
16	Primary Election Runoff	1 day	Tue 20-07-28	Tue 20-07-28		
17	General Election	1 day	Tue 20-11-03	Tue 20-11-03		
18	**Project Management**	383 days	Tue 19-07-16	Thu 20-12-31	6	
19	Project Initiation	14 days	Tue 19-07-16	Fri 19-08-02		
20	Review Project Structure, roles and responsib	11 days	Tue 19-07-16	Tue 19-07-30		
21	Review and update project plan	11 days	Tue 19-07-16	Tue 19-07-30	6	
22	Manufacturing and Deliveries Schedule	11 days	Tue 19-07-16	Tue 19-07-30		
23	Issues Tracking and Escalation Plan	11 days	Tue 19-07-16	Tue 19-07-30		
24	Risk Mitigation Plan	11 days	Tue 19-07-16	Tue 19-07-30		
25	Communication Plan	11 days	Tue 19-07-16	Tue 19-07-30		
26	Conflict Resolution Plan	11 days	Tue 19-07-16	Tue 19-07-30		
27	Training Plan Finalization	11 days	Tue 19-07-16	Tue 19-07-30		
28	Review and Adjust Training Schedules	11 days	Tue 19-07-16	Tue 19-07-30		

Page 1



ID	ⓘ	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Notes
29			Requirements Gathering, Gap Analysis and Application Configuration	11 days	Tue 19-07-16	Tue 19-07-30		
30			Requirements Review	11 days	Tue 19-07-16	Tue 19-07-30		
31			Requirements Signoff	1 day	Tue 19-07-30	Tue 19-07-30		
32			Create Election Data Import Bridge	12 days	Tue 19-07-16	Wed 19-07-31		
33			Customer kick-off meeting	1 day	Thu 19-08-01	Thu 19-08-01	31	
34			Poll Pad Build, Testing and Documentation	54 days	Tue 19-07-16	Fri 19-09-27		
35			Build	25 days	Tue 19-07-16	Mon 19-08-19		
36			Development	25 days	Tue 19-07-16	Mon 19-08-19		
37			Migrate App Changes	1 day	Fri 19-08-09	Fri 19-08-09		
38			Test	14 days	Mon 19-08-12	Thu 19-08-29		
39			Create test cases	5 days	Mon 19-08-12	Fri 19-08-16		
40			Acceptance Testing	7 days	Tue 19-08-20	Wed 19-08-28		
41			Testing Signoff	1 day	Thu 19-08-29	Thu 19-08-29		
42			Documentation	5 days	Mon 19-09-23	Fri 19-09-27		
43			Create administrator and user guides	5 days	Mon 19-09-23	Fri 19-09-27		
44			Project Meetings	371 days	Thu 19-08-01	Thu 20-12-31		
45	4		Weekly Project Status Meetings	371 days	Thu 19-08-01	Thu 20-12-31		
121								
122			Receipt and Acceptance Testing in DVS facility	125 days	Mon 19-07-29	Fri 20-01-17		DVS is prepared to receive the pilot election equipment the end of July. DVS is prepared to receive 7000 units per month until the balance has been delivered to the DVS facility. Initial acceptance testing will be performed at the DVS
123			July Shipment	20 days	Mon 19-07-29	Fri 19-08-23		
124			Recieve Shipment	3 days	Mon 19-07-29	Wed 19-07-31		
125			Initial Acceptance Test	18 days	Tue 19-07-30	Thu 19-08-22		
126			Preparation and Delivery of Equipment	17 days	Thu 19-08-01	Fri 19-08-23		
127			August Shipment	21 days	Mon 19-08-26	Mon 19-09-23		
128			Recieve Shipment	5 days	Mon 19-08-26	Fri 19-08-30		

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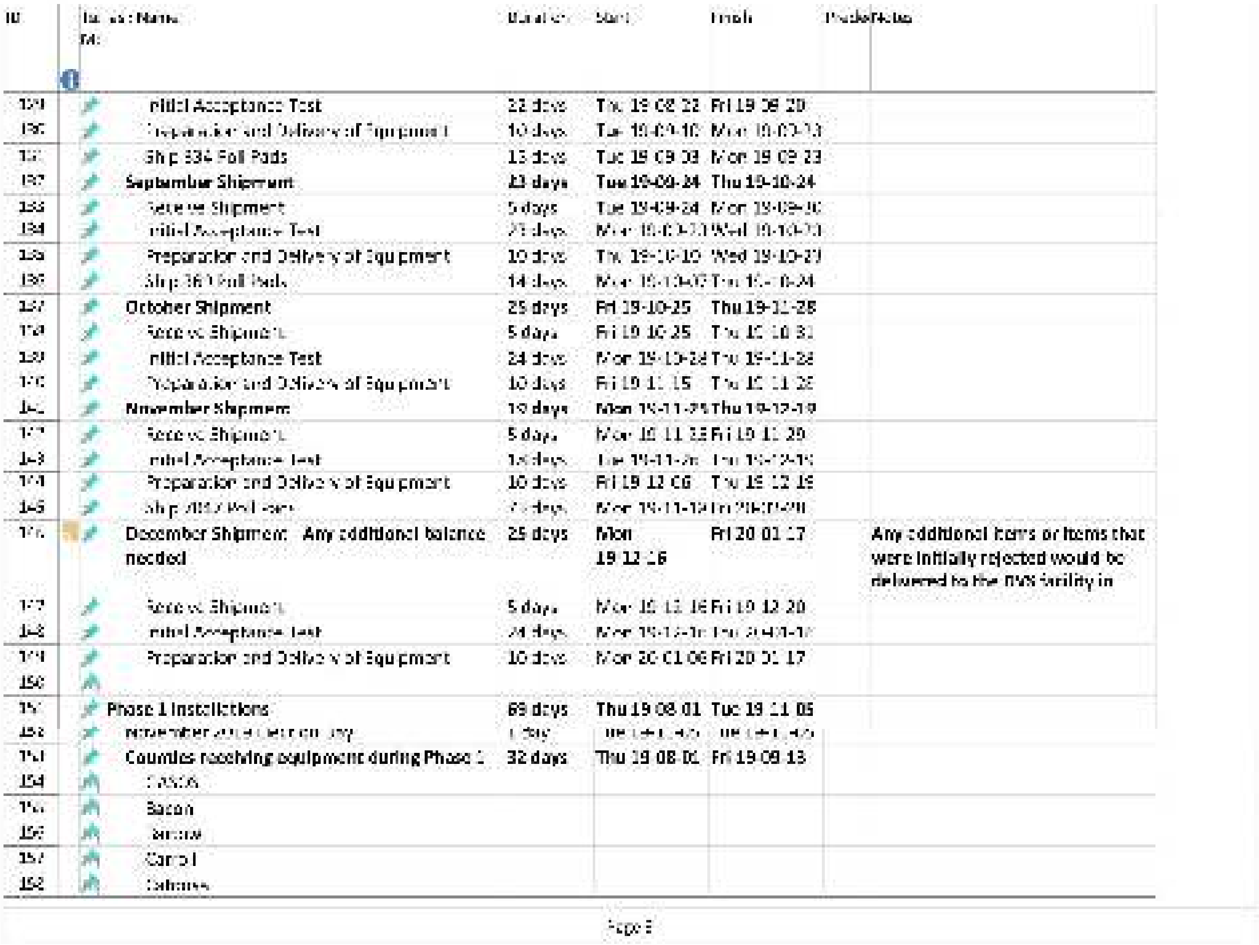
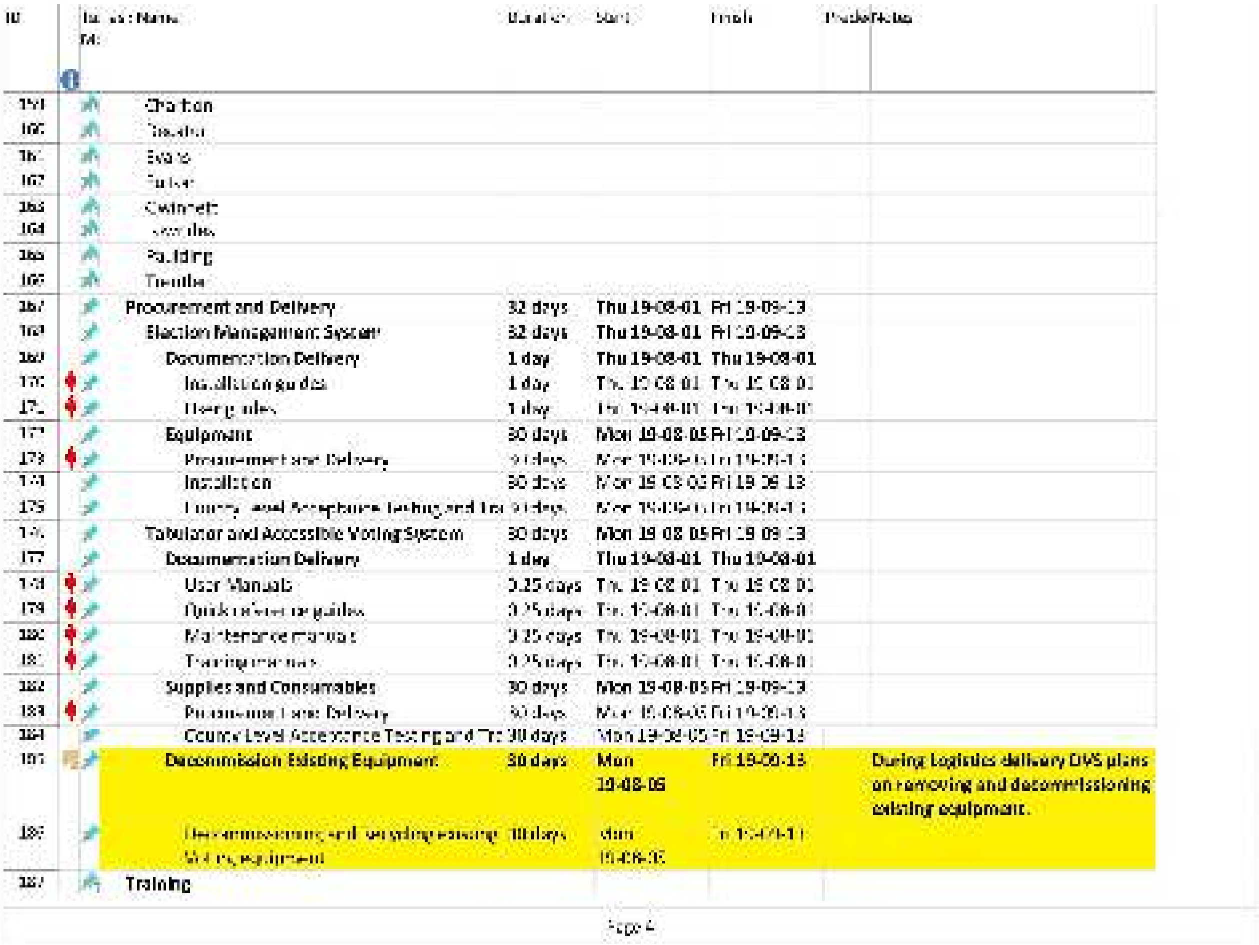


ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Notes
129		Initial Acceptance Test	22 days	Thu 19-08-22	Fri 19-09-20		
130		Preparation and Delivery of Equipment	10 days	Tue 19-09-10	Mon 19-09-23		
131		Ship 334 Poll Pads	13 days	Tue 19-09-03	Mon 19-09-23		
132		**September Shipment**	**23 days**	**Tue 19-09-24**	**Thu 19-10-24**		
133		Receive Shipment	5 days	Tue 19-09-24	Mon 19-09-30		
134		Initial Acceptance Test	23 days	Mon 19-09-30	Wed 19-10-30		
135		Preparation and Delivery of Equipment	10 days	Thu 19-10-10	Wed 19-10-23		
136		Ship 360 Poll Pads	14 days	Mon 19-10-07	Thu 19-10-24		
137		**October Shipment**	**25 days**	**Fri 19-10-25**	**Thu 19-11-28**		
138		Receive Shipment	5 days	Fri 19-10-25	Thu 19-10-31		
139		Initial Acceptance Test	24 days	Mon 19-10-28	Thu 19-11-28		
140		Preparation and Delivery of Equipment	10 days	Fri 19-11-15	Thu 19-11-28		
141		**November Shipment**	**19 days**	**Mon 19-11-25**	**Thu 19-12-19**		
142		Receive Shipment	5 days	Mon 19-11-25	Fri 19-11-29		
143		Initial Acceptance Test	18 days	Tue 19-11-26	Thu 19-12-19		
144		Preparation and Delivery of Equipment	10 days	Fri 19-12-06	Thu 19-12-19		
145		Ship 2017 Poll Pads	[illegible] days	Mon 19-11-18	Fri 20-01-10		
146		**December Shipment - Any additional balance needed**	**25 days**	**Mon 19-12-16**	**Fri 20-01-17**		**Any additional items or items that were initially rejected would be delivered to the DVS facility in**
147		Receive Shipment	5 days	Mon 19-12-16	Fri 19-12-20		
148		Initial Acceptance Test	24 days	Mon 19-12-16	Thu 20-01-16		
149		Preparation and Delivery of Equipment	10 days	Mon 20-01-06	Fri 20-01-17		
150							
151		**Phase 1 Installations**	**69 days**	**Thu 19-08-01**	**Tue 19-11-05**		
152		November 2019 Election Day	1 day	Tue 19-11-05	Tue 19-11-05		
153		**Counties receiving equipment during Phase 1**	**32 days**	**Thu 19-08-01**	**Fri 19-09-13**		
154		[illegible]					
155		Bacon					
156		Barrow					
157		Carroll					
158		Catoosa					



ID	Task Mode	Task Name	Duration	Start	Finish	Prede	Notes
159		Charlton					
160		Decatur					
161		Evans					
162		Fulton					
163		Gwinnett					
164		Lowndes					
165		Paulding					
166		Treutlen					
167		**Procurement and Delivery**	**32 days**	**Thu 19-08-01**	**Fri 19-09-13**		
168		**Election Management System**	**32 days**	**Thu 19-08-01**	**Fri 19-09-13**		
169		**Documentation Delivery**	**1 day**	**Thu 19-08-01**	**Thu 19-08-01**		
170		Installation guides	1 day	Thu 19-08-01	Thu 19-08-01		
171		User guides	1 day	Thu 19-08-01	Thu 19-08-01		
172		**Equipment**	**30 days**	**Mon 19-08-05**	**Fri 19-09-13**		
173		Procurement and Delivery	30 days	Mon 19-08-05	Fri 19-09-13		
174		Installation	30 days	Mon 19-08-05	Fri 19-09-13		
175		County Level Acceptance Testing and Tra	30 days	Mon 19-08-05	Fri 19-09-13		
176		**Tabulator and Accessible Voting System**	**30 days**	**Mon 19-08-05**	**Fri 19-09-13**		
177		**Documentation Delivery**	**1 day**	**Thu 19-08-01**	**Thu 19-08-01**		
178		User Manuals	0.25 days	Thu 19-08-01	Thu 19-08-01		
179		Quick reference guides	0.25 days	Thu 19-08-01	Thu 19-08-01		
180		Maintenance manuals	0.25 days	Thu 19-08-01	Thu 19-08-01		
181		Training manuals	0.25 days	Thu 19-08-01	Thu 19-08-01		
182		**Supplies and Consumables**	**30 days**	**Mon 19-08-05**	**Fri 19-09-13**		
183		Procurement and Delivery	30 days	Mon 19-08-05	Fri 19-09-13		
184		County Level Acceptance Testing and Tra	30 days	Mon 19-08-05	Fri 19-09-13		
185		**Decommission Existing Equipment**	**30 days**	**Mon 19-08-05**	**Fri 19-09-13**		**During Logistics delivery DVS plans on removing and decommissioning existing equipment.**
186		Decommissioning and recycling existing Voting equipment	30 days	Mon 19-08-05	Fri 19-09-13		
187		**Training**					

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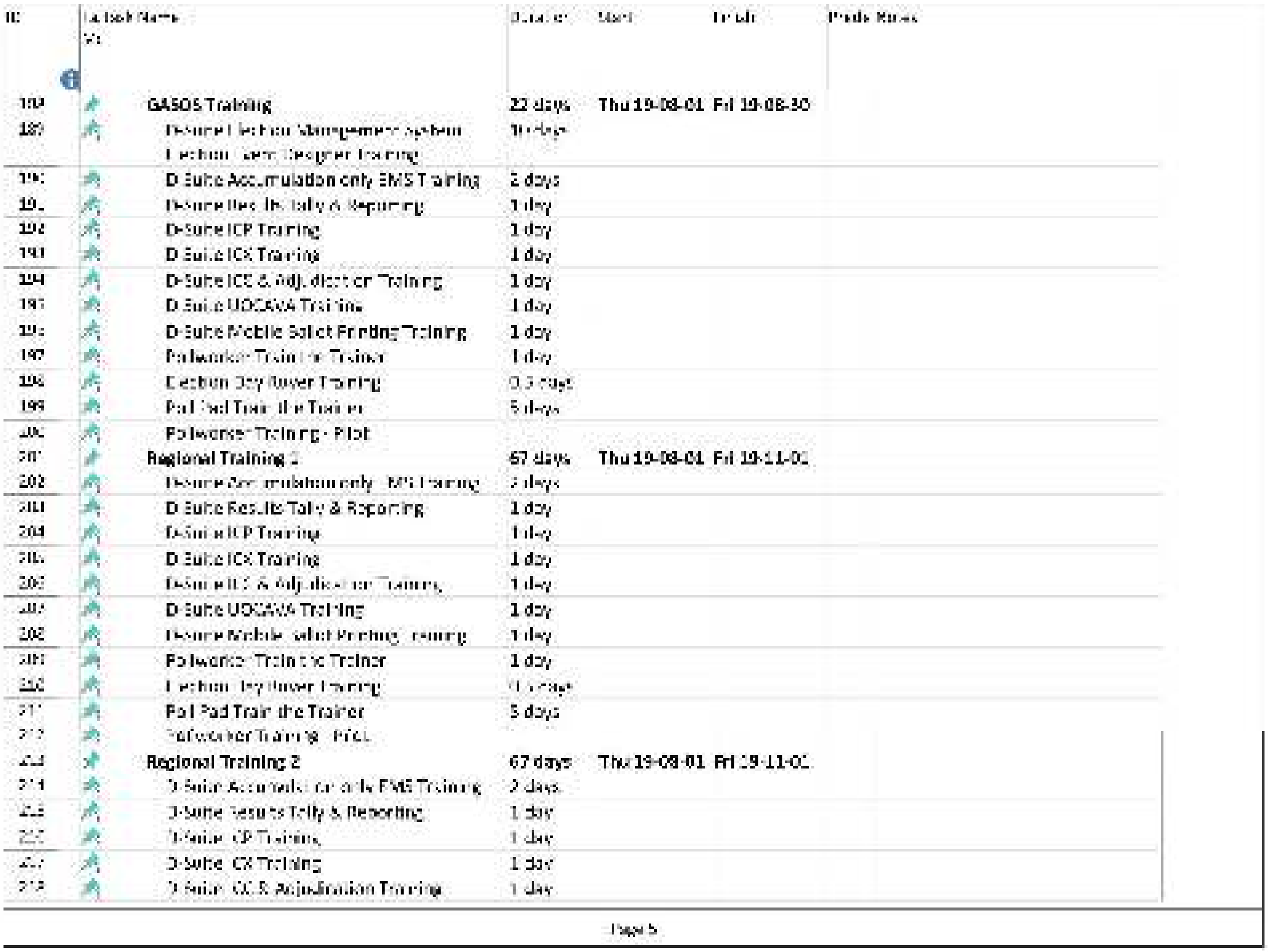

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
188		**GASOS Training**	**22 days**	**Thu 19-08-01**	**Fri 19-08-30**	
189		D-Suite Election Management System Election Event Designer Training	10 days			
190		D-Suite Accumulation only EMS Training	2 days			
191		D-Suite Results Tally & Reporting	1 day			
192		D-Suite ICP Training	1 day			
193		D-Suite ICX Training	1 day			
194		D-Suite ICC & Adjudication Training	1 day			
195		D-Suite UOCAVA Training	1 day			
196		D-Suite Mobile Ballot Printing Training	1 day			
197		Pollworker Train the Trainer	1 day			
198		Election Day Rover Training	0.5 days			
199		Poll Pad Train the Trainer	5 days			
200		Pollworker Training - Pilot				
201		**Regional Training 1**	**67 days**	**Thu 19-08-01**	**Fri 19-11-01**	
202		D-Suite Accumulation only EMS Training	2 days			
203		D-Suite Results Tally & Reporting	1 day			
204		D-Suite ICP Training	1 day			
205		D-Suite ICX Training	1 day			
206		D-Suite ICC & Adjudication Training	1 day			
207		D-Suite UOCAVA Training	1 day			
208		D-Suite Mobile Ballot Printing Training	1 day			
209		Pollworker Train the Trainer	1 day			
210		Election Day Rover Training	0.5 days			
211		Poll Pad Train the Trainer	5 days			
212		Pollworker Training - Pilot				
213		**Regional Training 2**	**67 days**	**Thu 19-08-01**	**Fri 19-11-01**	
214		D-Suite Accumulation only EMS Training	2 days			
215		D-Suite Results Tally & Reporting	1 day			
216		D-Suite ICP Training	1 day			
217		D-Suite ICX Training	1 day			
218		D-Suite ICC & Adjudication Training	1 day			

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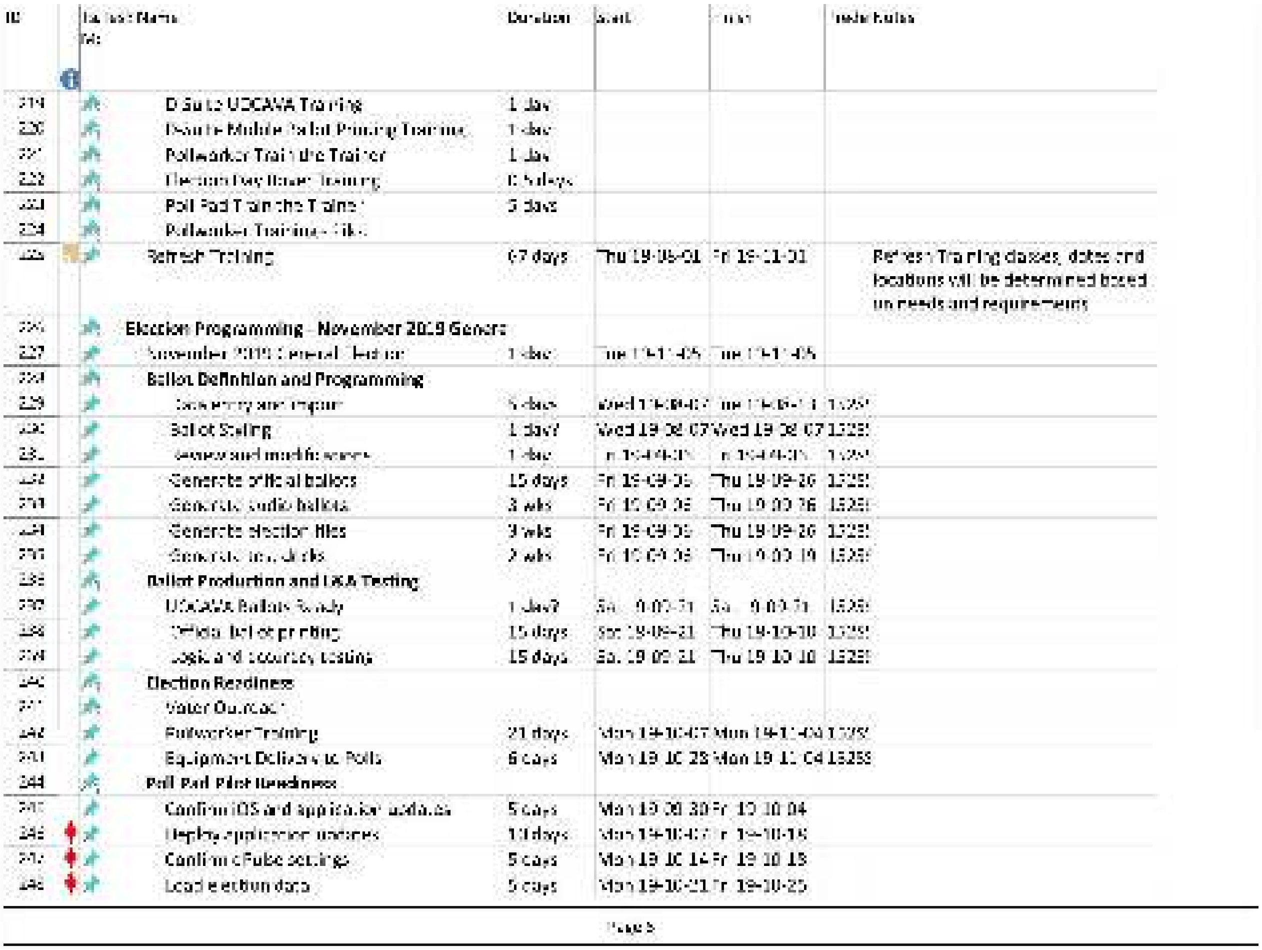

ID	ℹ	Ta Mo	Task Name	Duration	Start	Finish	Prede	Notes
219			D-Suite UOCAVA Training	1 day				
220			D-Suite Mobile Ballot Printing Training	1 day				
221			Pollworker Train the Trainer	1 day				
222			Election Day Boxes Training	0.5 days				
223			Poll Pad Train the Trainer	5 days				
224			Pollworker Training - Pilots					
225			Refresh Training	67 days	Thu 19-08-01	Fri 19-11-01		Refresh Training classes, dates and locations will be determined based on needs and requirements
226			**Election Programming - November 2019 Genera**					
227			November 2019 General Election	1 day	Tue 19-11-05	Tue 19-11-05		
228			**Ballot Definition and Programming**					
229			Data entry and import	5 days	[illegible]	[illegible]	1325	
230			Ballot Styling	1 day?	Wed 19-08-07	Wed 19-08-07	1325	
231			Review and modify screens	1 day	[illegible]	[illegible]	1325	
232			Generate official ballots	15 days	Fri 19-09-06	Thu 19-09-26	1325	
233			Generate audio ballots	3 wks	Fri 19-09-06	Thu 19-09-26	1325	
234			Generate election files	3 wks	Fri 19-09-06	Thu 19-09-26	1325	
235			Generate test decks	2 wks	Fri 19-09-06	Thu 19-09-19	1325	
236			**Ballot Production and L&A Testing**					
237			UOCAVA Ballots Ready	1 day?	Sat 19-09-21	Sat 19-09-21	1325	
238			Official ballot printing	15 days	Sat 19-09-21	Thu 19-10-10	1325	
239			Logic and accuracy testing	15 days	Sat 19-09-21	Thu 19-10-10	1325	
240			**Election Readiness**					
241			Voter Outreach					
242			Pollworker Training	21 days	Mon 19-10-07	Mon 19-11-04	1325	
243			Equipment Delivery to Polls	6 days	Mon 19-10-28	Mon 19-11-04	13259	
244			**Poll Pad Pilot Readiness**					
245			Confirm iOS and application updates	5 days	Mon 19-09-30	Fri 19-10-04		
246			Deploy application updates	10 days	Mon 19-10-07	Fri 19-10-18		
247			Confirm ePulse settings	5 days	Mon 19-10-14	Fri 19-10-18		
248			Load election data	5 days	Mon 19-10-21	Fri 19-10-25		

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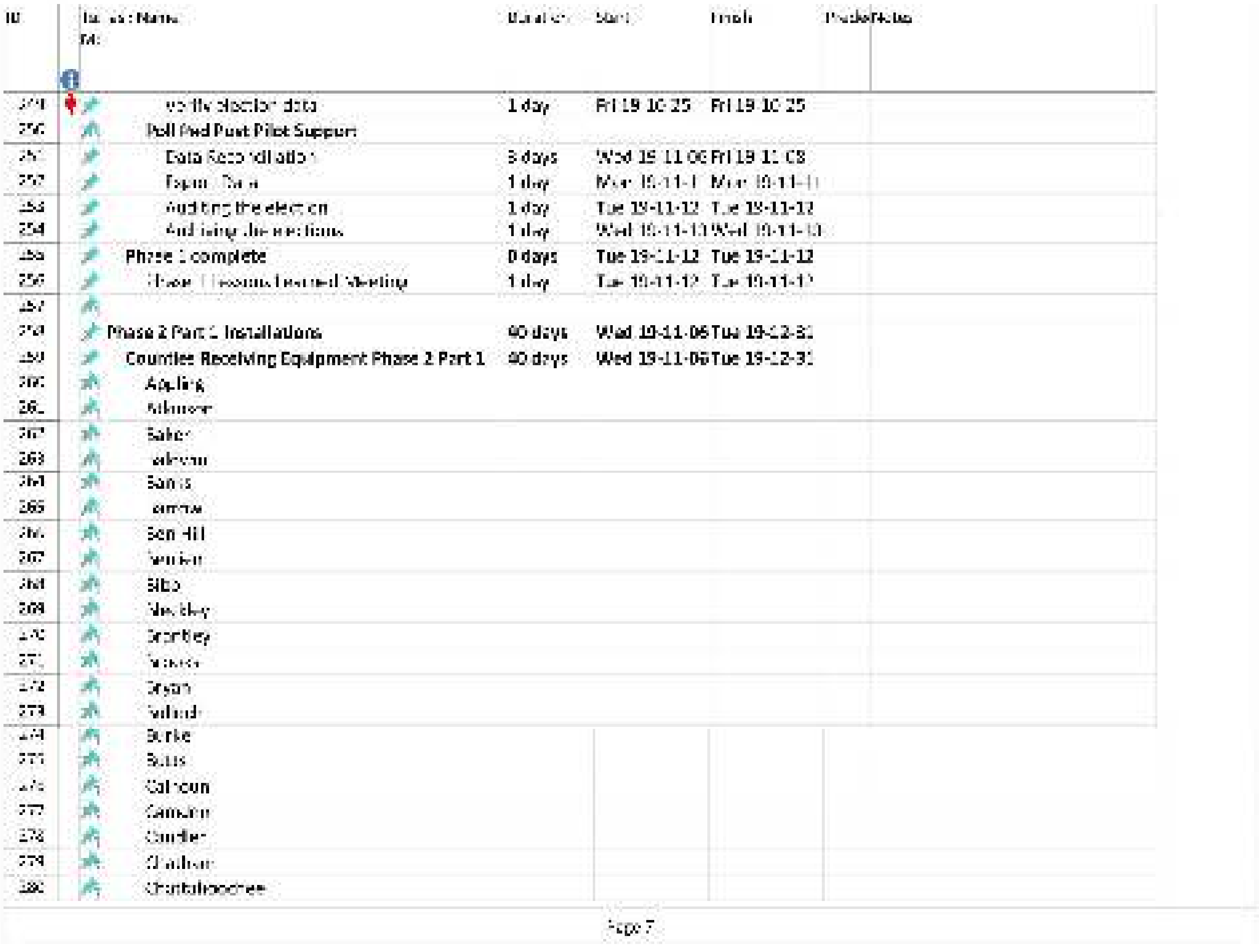

ID	ⓘ	Task Mode	Task Name	Duration	Start	Finish	Prede	Notes
249	●		Verify election data	1 day	Fri 19-10-25	Fri 19-10-25		
250			Poll Pad Post Pilot Support					
251			Data Reconciliation	3 days	Wed 19-11-06	Fri 19-11-08		
252			Export Data	1 day	Mon 19-11-1	Mon 19-11-11		
253			Auditing the election	1 day	Tue 19-11-12	Tue 19-11-12		
254			Auditing the elections	1 day	Wed 19-11-13	Wed 19-11-13		
255			**Phase 1 complete**	**0 days**	**Tue 19-11-12**	**Tue 19-11-12**		
256			Phase 1 Lessons Learned Meeting	1 day	Tue 19-11-12	Tue 19-11-12		
257								
258			**Phase 2 Part 1 Installations**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**		
259			**Counties Receiving Equipment Phase 2 Part 1**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**		
260			Appling					
261			Atkinson					
262			Baker					
263			Baldwin					
264			Banks					
265			Barrow					
266			Ben Hill					
267			Berrien					
268			Bibb					
269			Bleckley					
270			Brantley					
271			Brooks					
272			Bryan					
273			Bulloch					
274			Burke					
275			Butts					
276			Calhoun					
277			Camden					
278			Candler					
279			Chatham					
280			Chattahoochee					

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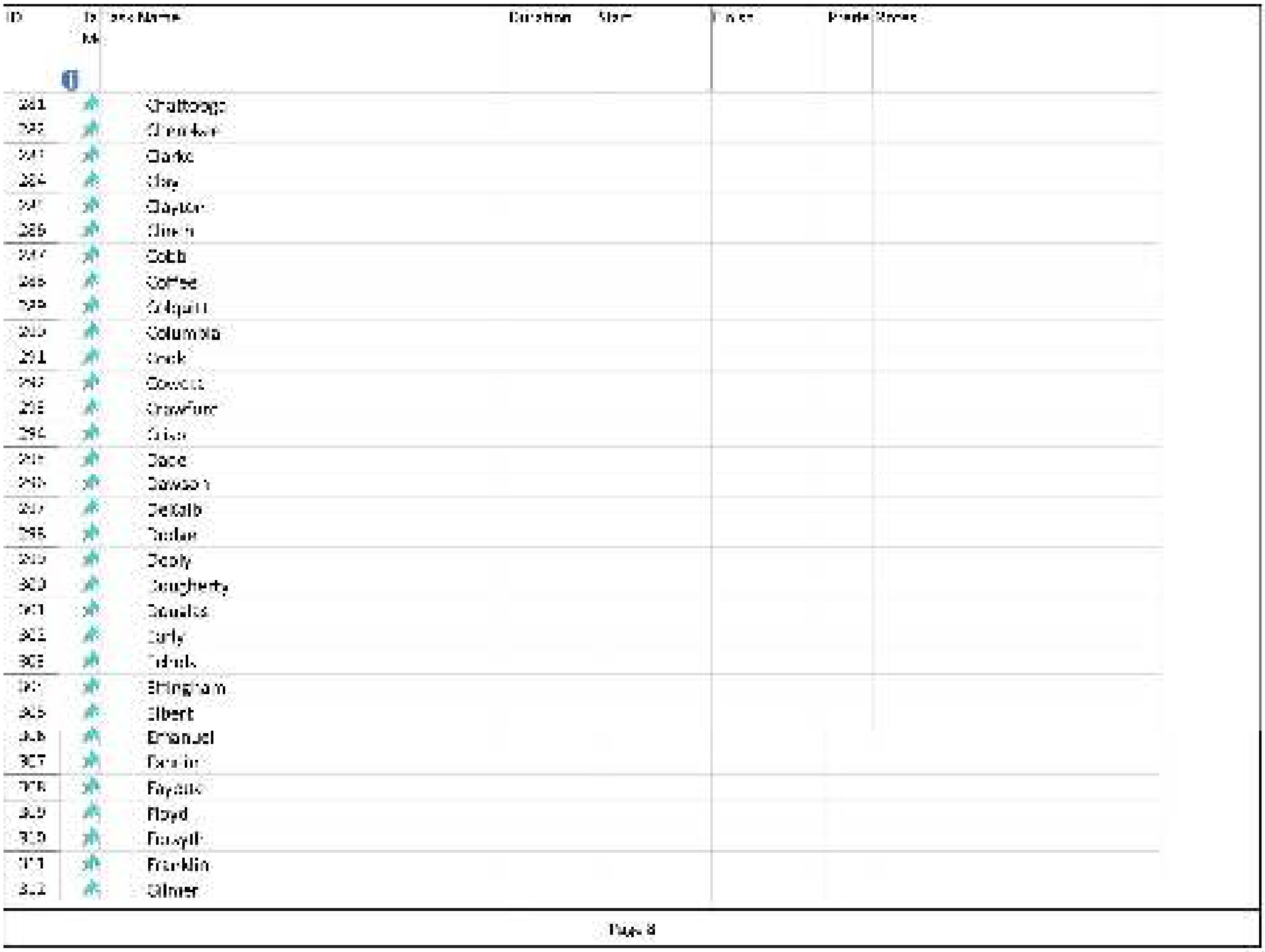

ID	Ta Mo	Task Name	Duration	Start	Finish	Prede	Notes
281		Chattooga					
282		Cherokee					
283		Clarke					
284		Clay					
285		Clayton					
286		Clinch					
287		Cobb					
288		Coffee					
289		Colquitt					
290		Columbia					
291		Cook					
292		Coweta					
293		Crawford					
294		Crisp					
295		Dade					
296		Dawson					
297		DeKalb					
298		Decatur					
299		Dooly					
300		Dougherty					
301		Douglas					
302		Early					
303		Echols					
304		Effingham					
305		Elbert					
306		Emanuel					
307		Fannin					
308		Fayette					
309		Floyd					
310		Forsyth					
311		Franklin					
312		Gilmer					

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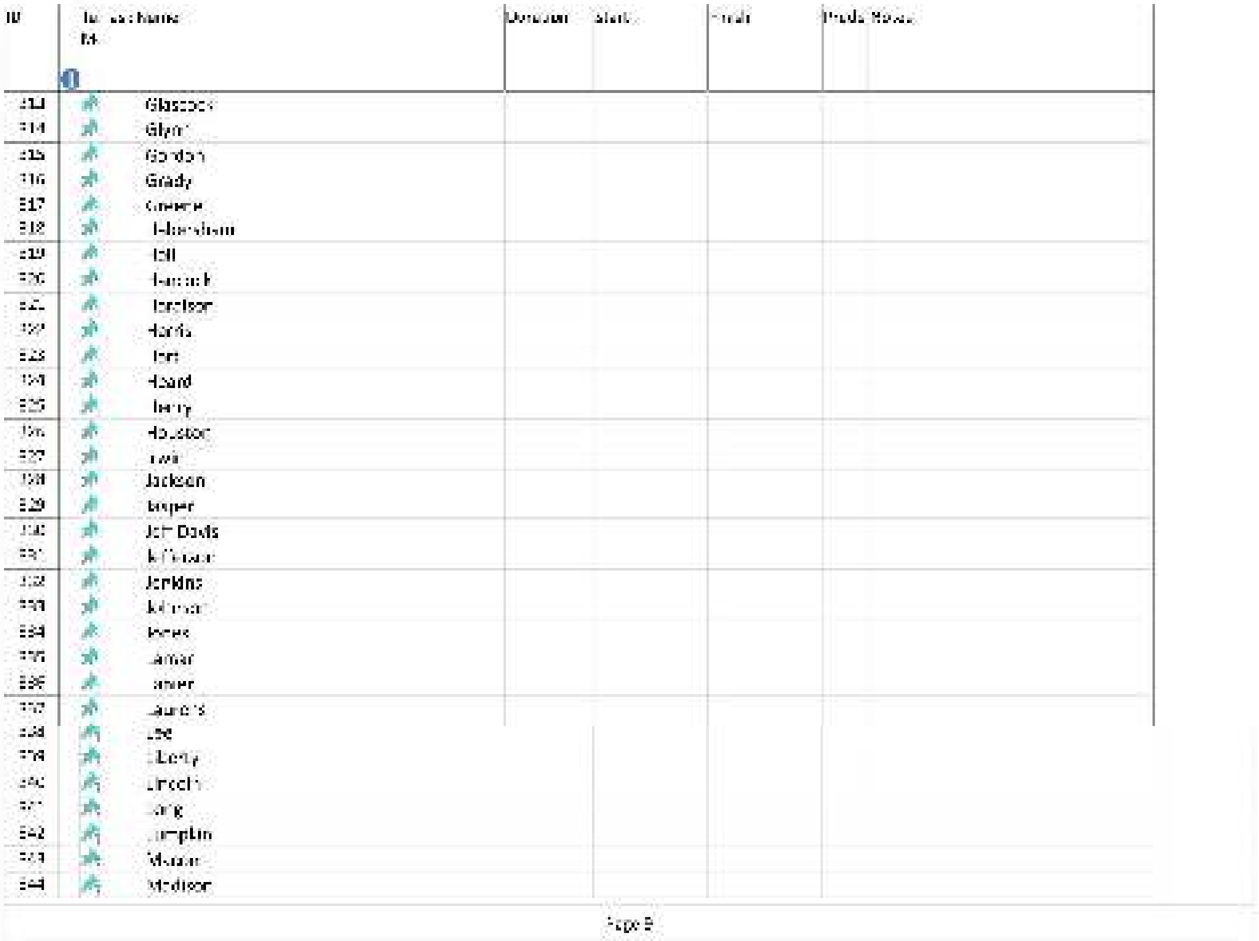

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
513		Glascock				
514		Glynn				
515		Gordon				
516		Grady				
517		Greene				
518		Habersham				
519		Hall				
520		Hancock				
521		Haralson				
522		Harris				
523		Hart				
524		Heard				
525		Henry				
526		Houston				
527		Irwin				
528		Jackson				
529		Jasper				
530		Jeff Davis				
531		Jefferson				
532		Jenkins				
533		Johnson				
534		Jones				
535		Lamar				
536		Lanier				
537		Laurens				
538		Lee				
539		Liberty				
540		Lincoln				
541		Long				
542		Lumpkin				
543		Macon				
544		Madison				

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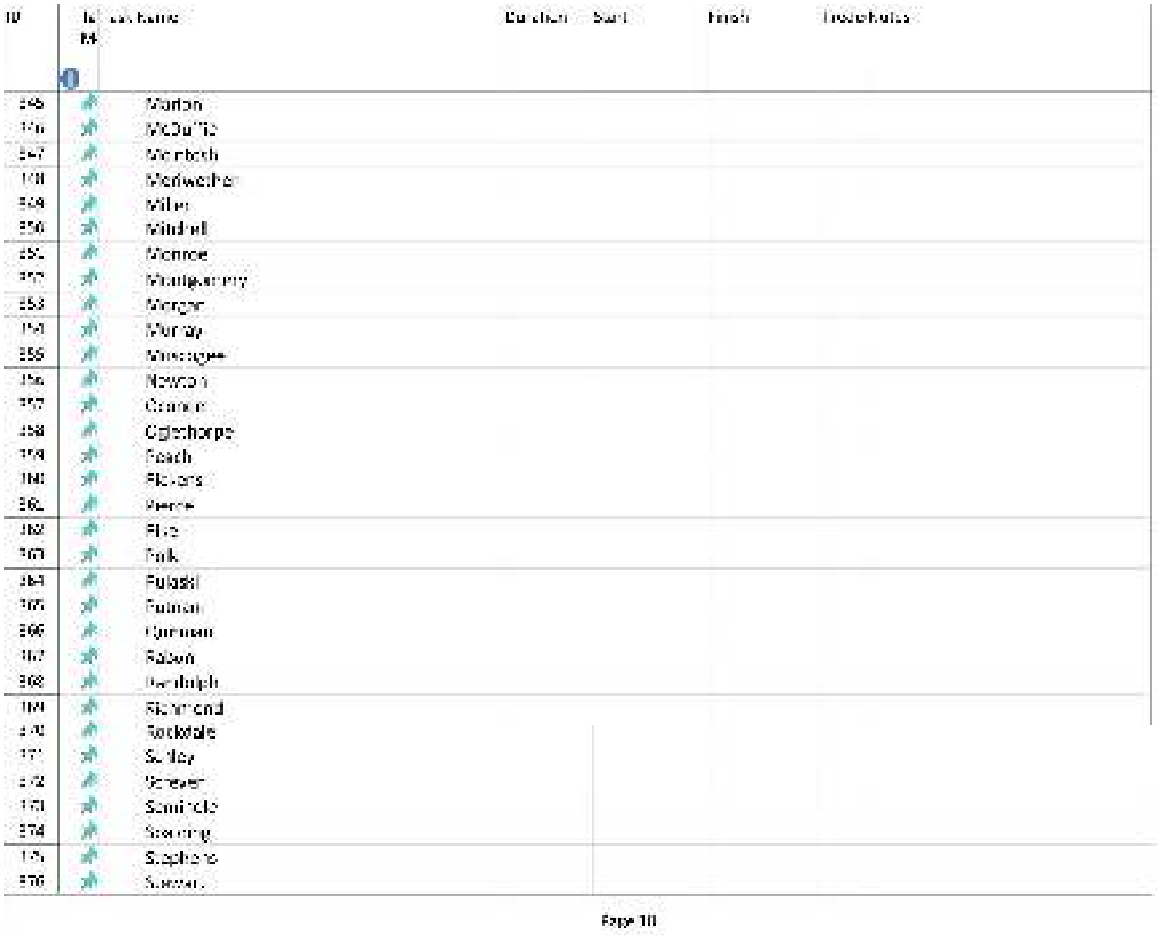

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
345	📌	Marion				
346	📌	McDuffie				
347	📌	McIntosh				
348	📌	Meriwether				
349	📌	Miller				
350	📌	Mitchell				
351	📌	Monroe				
352	📌	Montgomery				
353	📌	Morgan				
354	📌	Murray				
355	📌	Muscogee				
356	📌	Newton				
357	📌	Oconee				
358	📌	Oglethorpe				
359	📌	Peach				
360	📌	Pickens				
361	📌	Pierce				
362	📌	Pike				
363	📌	Polk				
364	📌	Pulaski				
365	📌	Putnam				
366	📌	Quitman				
367	📌	Rabun				
368	📌	Randolph				
369	📌	Richmond				
370	📌	Rockdale				
371	📌	Schley				
372	📌	Screven				
373	📌	Seminole				
374	📌	Spalding				
375	📌	Stephens				
376	📌	Stewart				

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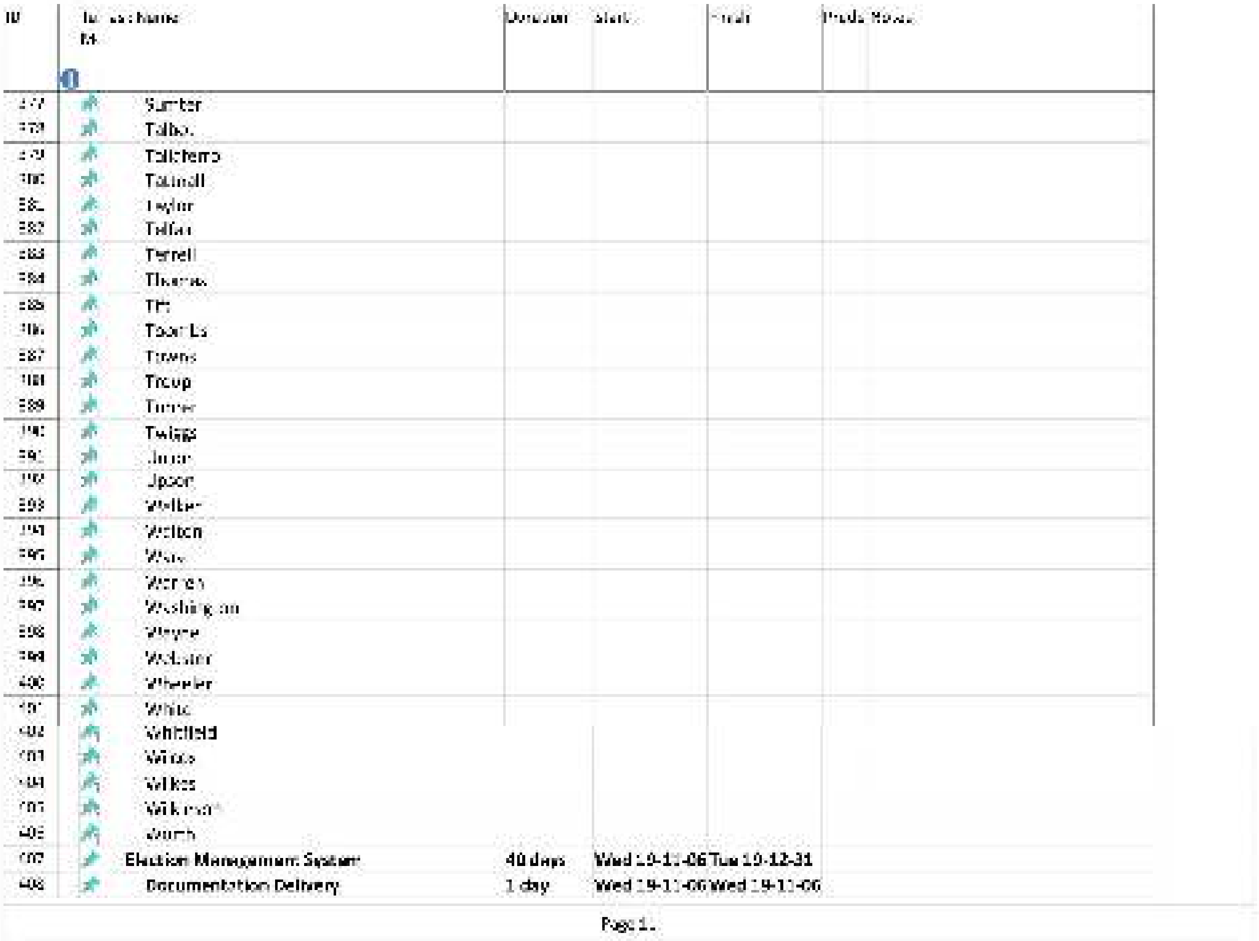

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
377		Sumter				
378		Talbot				
379		Taliaferro				
380		Tattnall				
381		Taylor				
382		Telfair				
383		Terrell				
384		Thomas				
385		Tift				
386		Toombs				
387		Towns				
388		Troup				
389		Turner				
390		Twiggs				
391		Union				
392		Upson				
393		Walker				
394		Walton				
395		Ware				
396		Warren				
397		Washington				
398		Wayne				
399		Webster				
400		Wheeler				
401		White				
402		Whitfield				
403		Wilcox				
404		Wilkes				
405		Wilkinson				
406		Worth				
407		Election Management System	40 days	Wed 19-11-06	Tue 19-12-31	
408		Documentation Delivery	1 day	Wed 19-11-06	Wed 19-11-06	

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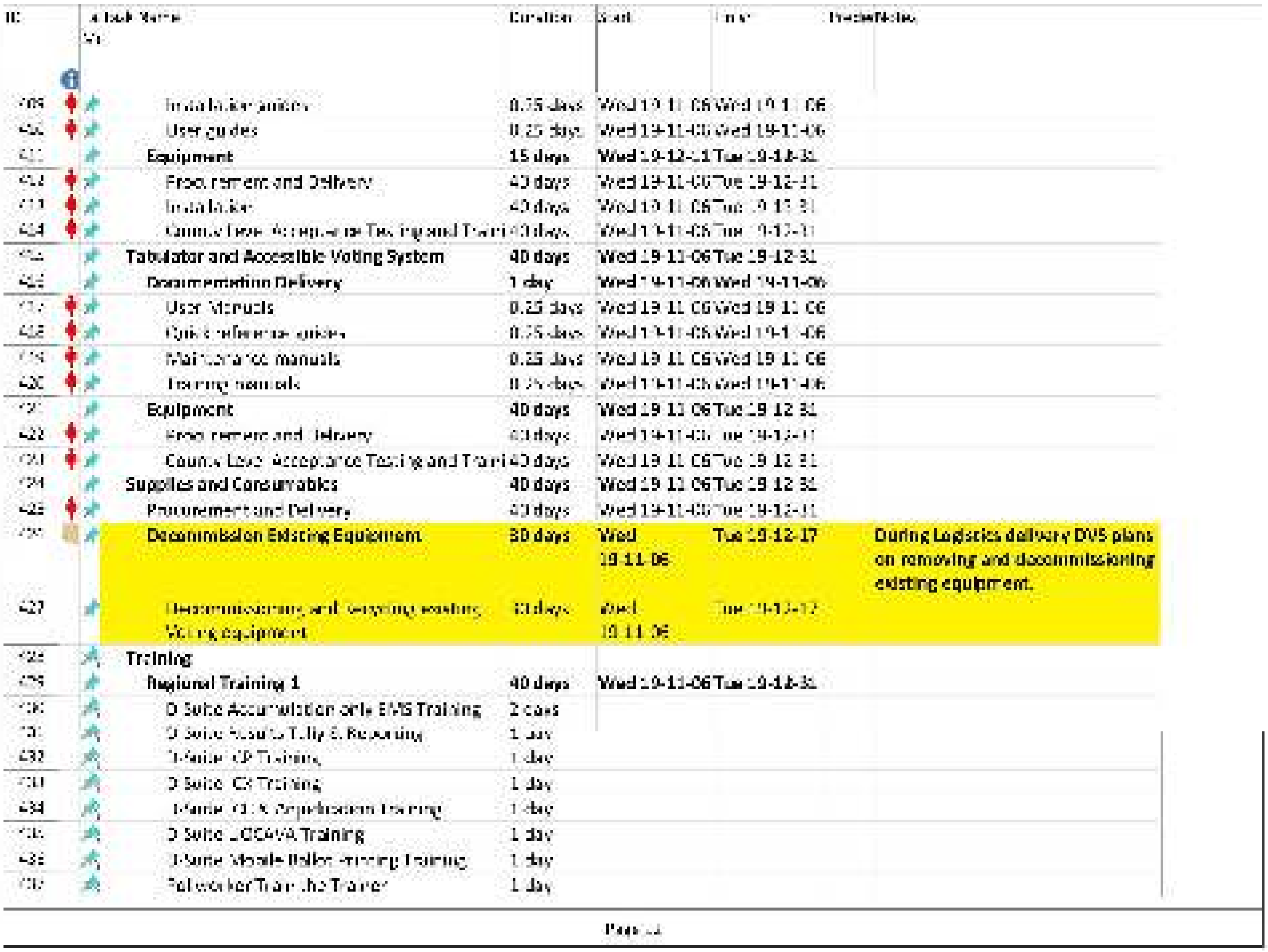

ID	Task Mode	Task Name	Duration	Start	Finish	Prede	Notes
409		Installation guides	0.25 days	Wed 19-11-06	Wed 19-11-06		
410		User guides	0.25 days	Wed 19-11-06	Wed 19-11-06		
411		**Equipment**	**15 days**	**Wed 19-12-11**	**Tue 19-12-31**		
412		Procurement and Delivery	40 days	Wed 19-11-06	Tue 19-12-31		
413		Installation	40 days	Wed 19-11-06	Tue 19-12-31		
414		County Level Acceptance Testing and Traini	40 days	Wed 19-11-06	Tue 19-12-31		
415		**Tabulator and Accessible Voting System**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**		
416		**Documentation Delivery**	**1 day**	**Wed 19-11-06**	**Wed 19-11-06**		
417		User Manuals	0.25 days	Wed 19-11-06	Wed 19-11-06		
418		Quick reference guides	0.25 days	Wed 19-11-06	Wed 19-11-06		
419		Maintenance manuals	0.25 days	Wed 19-11-06	Wed 19-11-06		
420		Training manuals	0.25 days	Wed 19-11-06	Wed 19-11-06		
421		**Equipment**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**		
422		Procurement and Delivery	40 days	Wed 19-11-06	Tue 19-12-31		
423		County Level Acceptance Testing and Traini	40 days	Wed 19-11-06	Tue 19-12-31		
424		**Supplies and Consumables**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**		
425		Procurement and Delivery	40 days	Wed 19-11-06	Tue 19-12-31		
426		**Decommission Existing Equipment**	**30 days**	**Wed 19-11-06**	**Tue 19-12-17**		**During Logistics delivery DVS plans on removing and decommissioning existing equipment.**
427		Decommissioning and recycling existing Voting equipment	30 days	Wed 19-11-06	Tue 19-12-17		
428		**Training**					
429		**Regional Training 1**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**		
430		D-Suite Accumulation only EMS Training	2 days				
431		D-Suite Results Tally & Reporting	1 day				
432		D-Suite ICP Training	1 day				
433		D-Suite ICX Training	1 day				
434		D-Suite ICC & Adjudication Training	1 day				
435		D-Suite UOCAVA Training	1 day				
436		D-Suite Mobile Ballot Printing Training	1 day				
437		Pollworker Train the Trainer	1 day				

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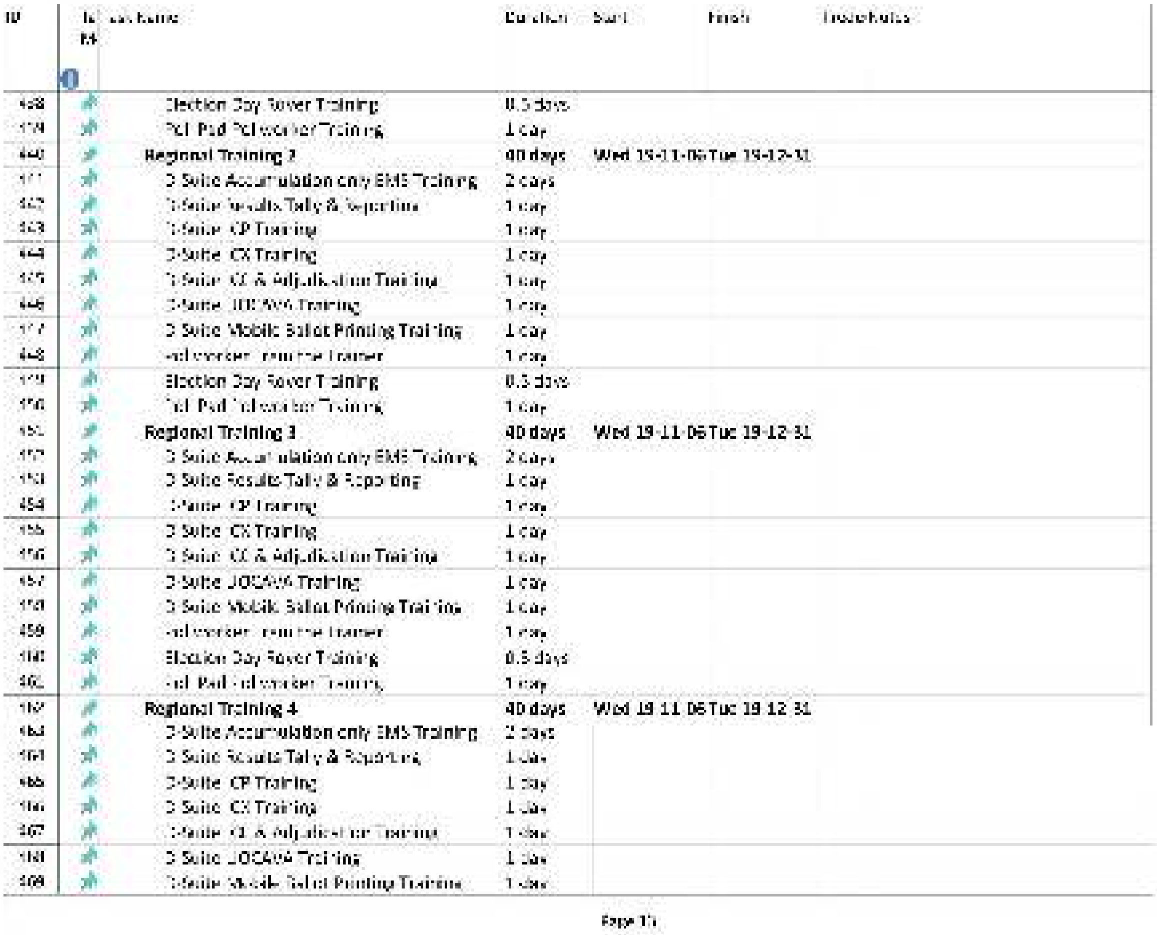

ID	Task Mode	Task Name	Duration	Start	Finish	Trade Notes
438		Election Day Rover Training	0.5 days			
439		Poll Pad Pollworker Training	1 day			
440		**Regional Training 2**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**	
441		D-Suite Accumulation only EMS Training	2 days			
442		D-Suite Results Tally & Reporting	1 day			
443		D-Suite ICP Training	1 day			
444		D-Suite ICX Training	1 day			
445		D-Suite ICC & Adjudication Training	1 day			
446		D-Suite UOCAVA Training	1 day			
447		D-Suite Mobile Ballot Printing Training	1 day			
448		Poll worker Train the Trainer	1 day			
449		Election Day Rover Training	0.5 days			
450		Poll Pad Pollworker Training	1 day			
451		**Regional Training 3**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**	
452		D-Suite Accumulation only EMS Training	2 days			
453		D-Suite Results Tally & Reporting	1 day			
454		D-Suite ICP Training	1 day			
455		D-Suite ICX Training	1 day			
456		D-Suite ICC & Adjudication Training	1 day			
457		D-Suite UOCAVA Training	1 day			
458		D-Suite Mobile Ballot Printing Training	1 day			
459		Poll worker Train the Trainer	1 day			
460		Election Day Rover Training	0.5 days			
461		Poll Pad Pollworker Training	1 day			
462		**Regional Training 4**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**	
463		D-Suite Accumulation only EMS Training	2 days			
464		D-Suite Results Tally & Reporting	1 day			
465		D-Suite ICP Training	1 day			
466		D-Suite ICX Training	1 day			
467		D-Suite ICC & Adjudication Training	1 day			
468		D-Suite UOCAVA Training	1 day			
469		D-Suite Mobile Ballot Printing Training	1 day			

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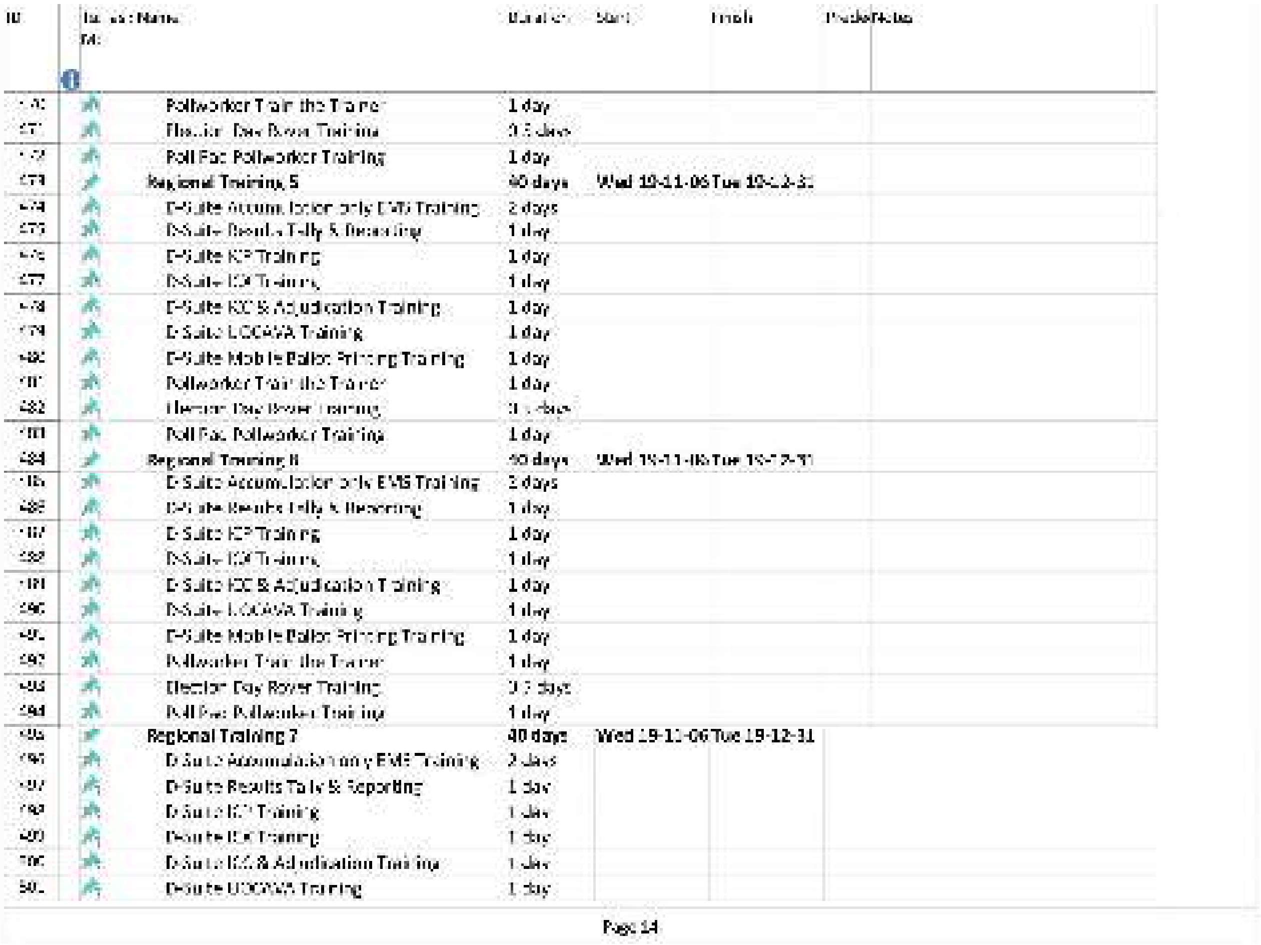

ID	Task Mode	Task Name	Duration	Start	Finish	Predece	Notes
470		Pollworker Train the Trainer	1 day				
471		Election Day Rover Training	0.5 days				
472		Poll Pad Pollworker Training	1 day				
473		**Regional Training 5**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**		
474		D-Suite Accumulation only EMS Training	2 days				
475		D-Suite Results Tally & Reporting	1 day				
476		D-Suite ICP Training	1 day				
477		D-Suite ICX Training	1 day				
478		D-Suite ICC & Adjudication Training	1 day				
479		D-Suite UOCAVA Training	1 day				
480		D-Suite Mobile Ballot Printing Training	1 day				
481		Pollworker Train the Trainer	1 day				
482		Election Day Rover Training	0.5 days				
483		Poll Pad Pollworker Training	1 day				
484		**Regional Training 6**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**		
485		D-Suite Accumulation only EMS Training	2 days				
486		D-Suite Results Tally & Reporting	1 day				
487		D-Suite ICP Training	1 day				
488		D-Suite ICX Training	1 day				
489		D-Suite ICC & Adjudication Training	1 day				
490		D-Suite UOCAVA Training	1 day				
491		D-Suite Mobile Ballot Printing Training	1 day				
492		Pollworker Train the Trainer	1 day				
493		Election Day Rover Training	0.5 days				
494		Poll Pad Pollworker Training	1 day				
495		**Regional Training 7**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**		
496		D-Suite Accumulation only EMS Training	2 days				
497		D-Suite Results Tally & Reporting	1 day				
498		D-Suite ICP Training	1 day				
499		D-Suite ICX Training	1 day				
500		D-Suite ICC & Adjudication Training	1 day				
501		D-Suite UOCAVA Training	1 day				

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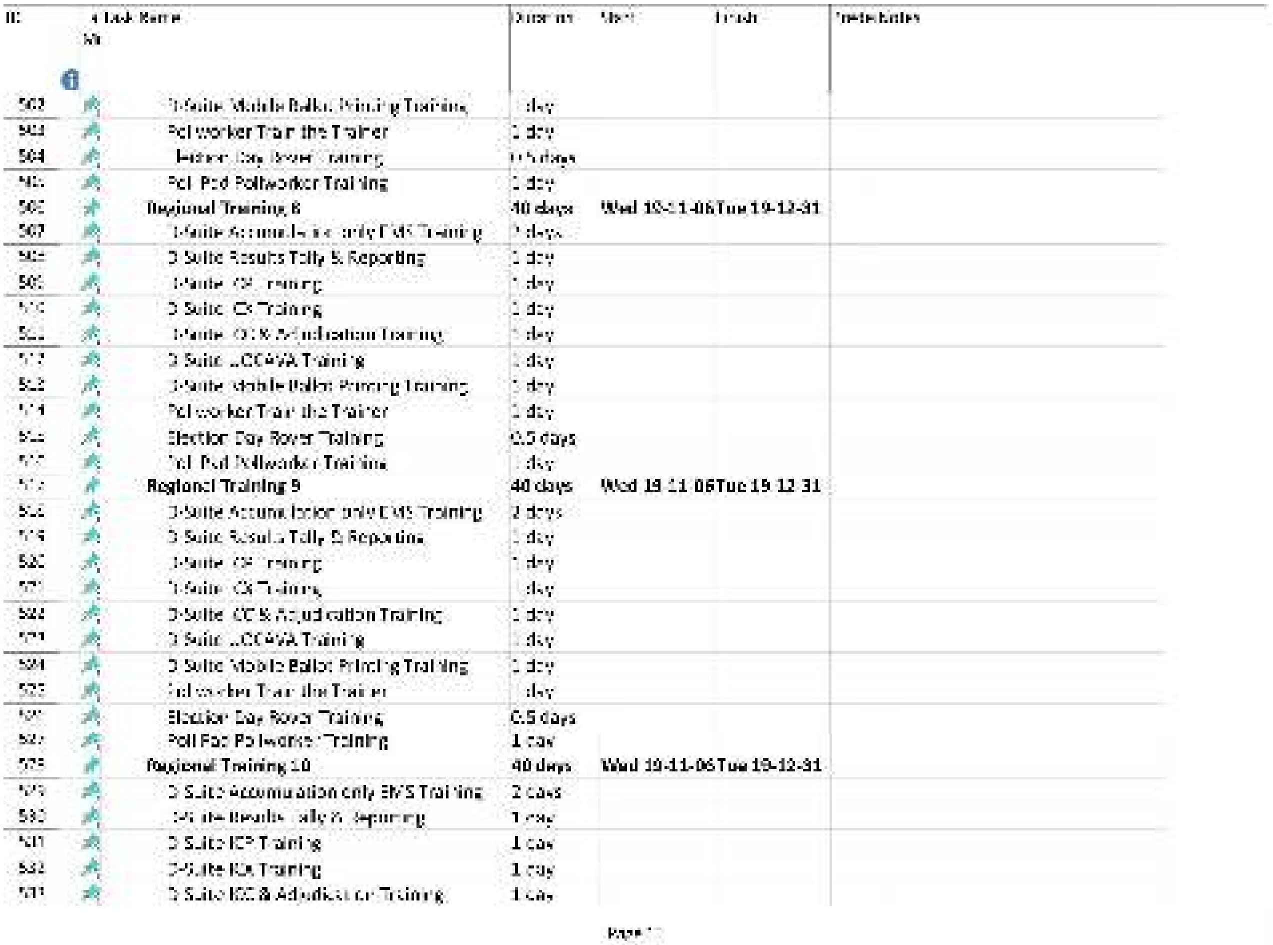

ID	Task Mode	Task Name	Duration	Start	Finish	Prede Notes
502		D-Suite Mobile Ballot Printing Training	1 day			
503		Pollworker Train the Trainer	1 day			
504		Election Day Rover Training	0.5 days			
505		Poll Pad Pollworker Training	1 day			
506		**Regional Training 8**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**	
507		D-Suite Accumulation only EMS Training	2 days			
508		D-Suite Results Tally & Reporting	1 day			
509		D-Suite ICP Training	1 day			
510		D-Suite ICX Training	1 day			
511		D-Suite ICC & Adjudication Training	1 day			
512		D-Suite UOCAVA Training	1 day			
513		D-Suite Mobile Ballot Printing Training	1 day			
514		Pollworker Train the Trainer	1 day			
515		Election Day Rover Training	0.5 days			
516		Poll Pad Pollworker Training	1 day			
517		**Regional Training 9**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**	
518		D-Suite Accumulation only EMS Training	2 days			
519		D-Suite Results Tally & Reporting	1 day			
520		D-Suite ICP Training	1 day			
521		D-Suite ICX Training	1 day			
522		D-Suite ICC & Adjudication Training	1 day			
523		D-Suite UOCAVA Training	1 day			
524		D-Suite Mobile Ballot Printing Training	1 day			
525		Pollworker Train the Trainer	1 day			
526		Election Day Rover Training	0.5 days			
527		Poll Pad Pollworker Training	1 day			
528		**Regional Training 10**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**	
529		D-Suite Accumulation only EMS Training	2 days			
530		D-Suite Results Tally & Reporting	1 day			
531		D-Suite ICP Training	1 day			
532		D-Suite ICX Training	1 day			
533		D-Suite ICC & Adjudication Training	1 day			

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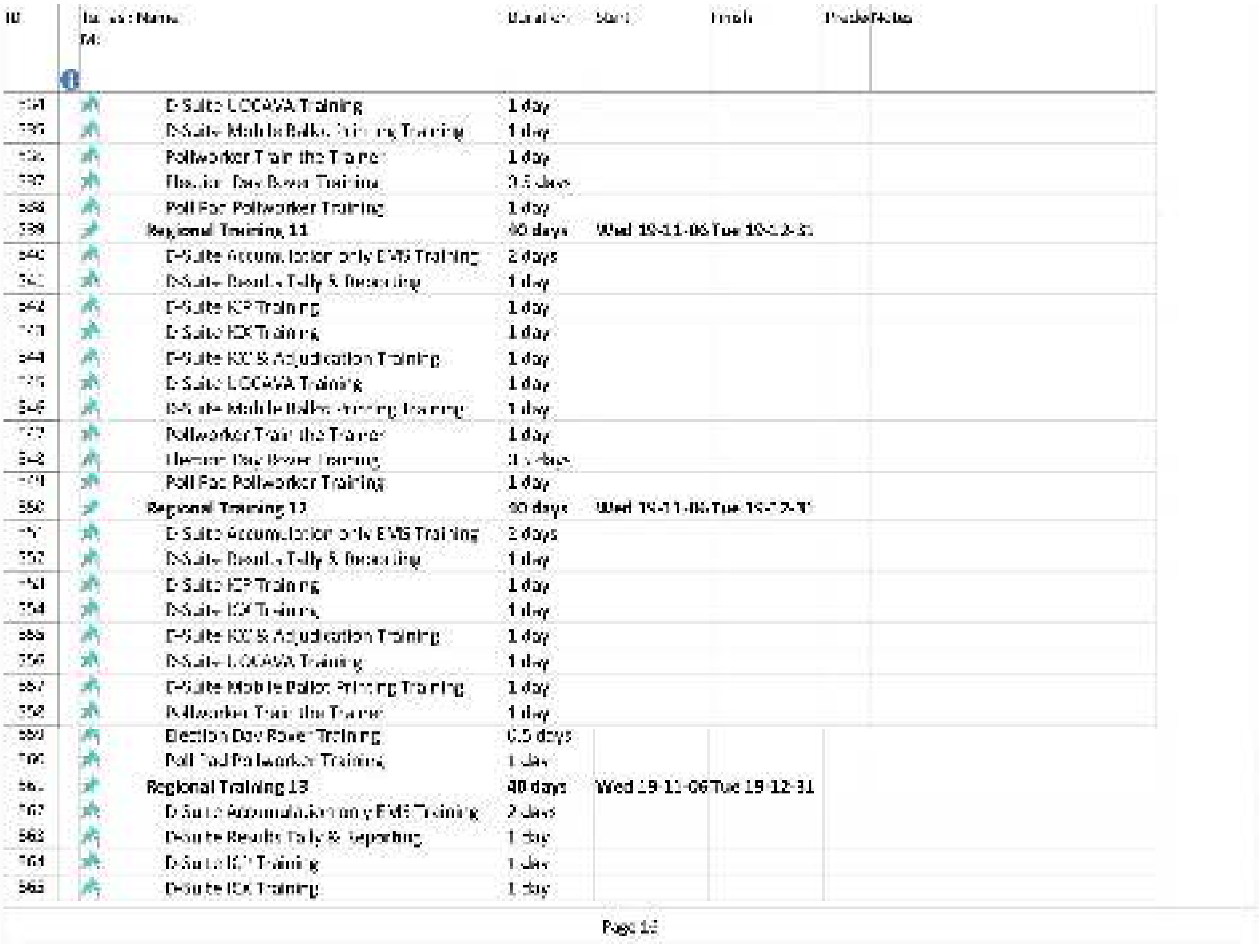

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Notes
534		E-Suite UOCAVA Training	1 day				
535		E-Suite Mobile Ballot Printing Training	1 day				
536		Pollworker Train the Trainer	1 day				
537		Election Day Rover Training	0.5 days				
538		Poll Pad Pollworker Training	1 day				
539		**Regional Training 11**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**		
540		E-Suite Accumulation only EMS Training	2 days				
541		E-Suite Results Tally & Reporting	1 day				
542		E-Suite ICP Training	1 day				
543		E-Suite ICX Training	1 day				
544		E-Suite ICC & Adjudication Training	1 day				
545		E-Suite UOCAVA Training	1 day				
546		E-Suite Mobile Ballot Printing Training	1 day				
547		Pollworker Train the Trainer	1 day				
548		Election Day Rover Training	0.5 days				
549		Poll Pad Pollworker Training	1 day				
550		**Regional Training 12**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**		
551		E-Suite Accumulation only EMS Training	2 days				
552		E-Suite Results Tally & Reporting	1 day				
553		E-Suite ICP Training	1 day				
554		E-Suite ICX Training	1 day				
555		E-Suite ICC & Adjudication Training	1 day				
556		E-Suite UOCAVA Training	1 day				
557		E-Suite Mobile Ballot Printing Training	1 day				
558		Pollworker Train the Trainer	1 day				
559		Election Day Rover Training	0.5 days				
560		Poll Pad Pollworker Training	1 day				
561		**Regional Training 13**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**		
562		E-Suite Accumulation only EMS Training	2 days				
563		E-Suite Results Tally & Reporting	1 day				
564		E-Suite ICP Training	1 day				
565		E-Suite ICX Training	1 day				

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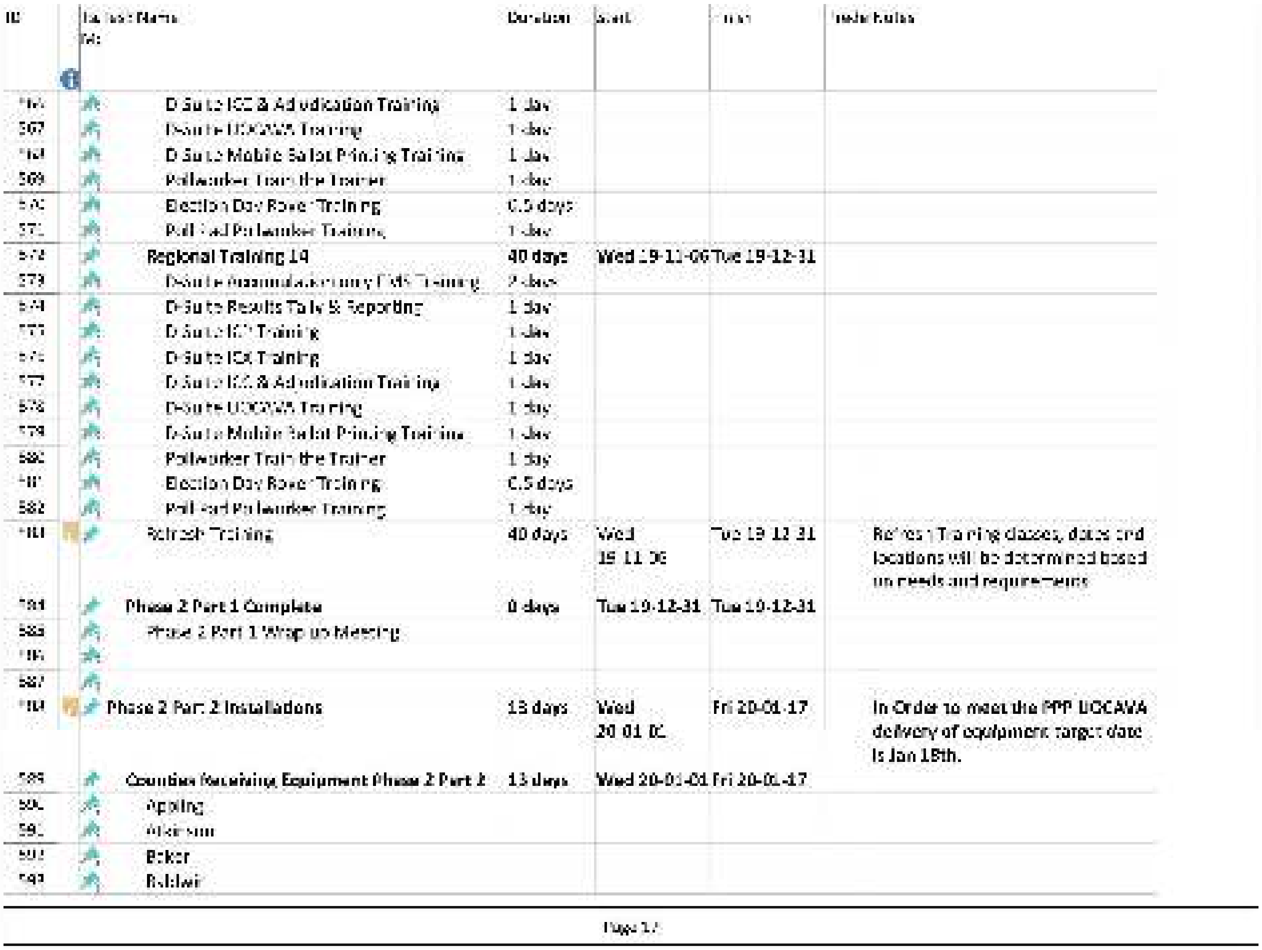

ID	Task Mode	Task Name	Duration	Start	Finish	Task Notes
566		D-Suite ICC & Adjudication Training	1 day			
567		D-Suite UOCAVA Training	1 day			
568		D-Suite Mobile Ballot Printing Training	1 day			
569		Pollworker Train the Trainer	1 day			
570		Election Day Rover Training	0.5 days			
571		Poll Pad Pollworker Training	1 day			
572		**Regional Training 14**	**40 days**	**Wed 19-11-06**	**Tue 19-12-31**	
573		D-Suite Accumulator only EMS Training	2 days			
574		D-Suite Results Tally & Reporting	1 day			
575		D-Suite ICP Training	1 day			
576		D-Suite ICX Training	1 day			
577		D-Suite ICC & Adjudication Training	1 day			
578		D-Suite UOCAVA Training	1 day			
579		D-Suite Mobile Ballot Printing Training	1 day			
580		Pollworker Train the Trainer	1 day			
581		Election Day Rover Training	0.5 days			
582		Poll Pad Pollworker Training	1 day			
583		Refresh Training	40 days	Wed 19-11-06	Tue 19-12-31	Refresh Training classes, dates and locations will be determined based on needs and requirements
584		**Phase 2 Part 1 Complete**	**0 days**	**Tue 19-12-31**	**Tue 19-12-31**	
585		Phase 2 Part 1 Wrap up Meeting				
586						
587						
588		**Phase 2 Part 2 Installations**	**13 days**	**Wed 20-01-01**	**Fri 20-01-17**	*In Order to meet the PPP UOCAVA delivery of equipment target date is Jan 18th.*
589		**Counties Receiving Equipment Phase 2 Part 2**	**13 days**	**Wed 20-01-01**	**Fri 20-01-17**	
590		Appling				
591		Atkinson				
592		Baker				
593		Baldwin				

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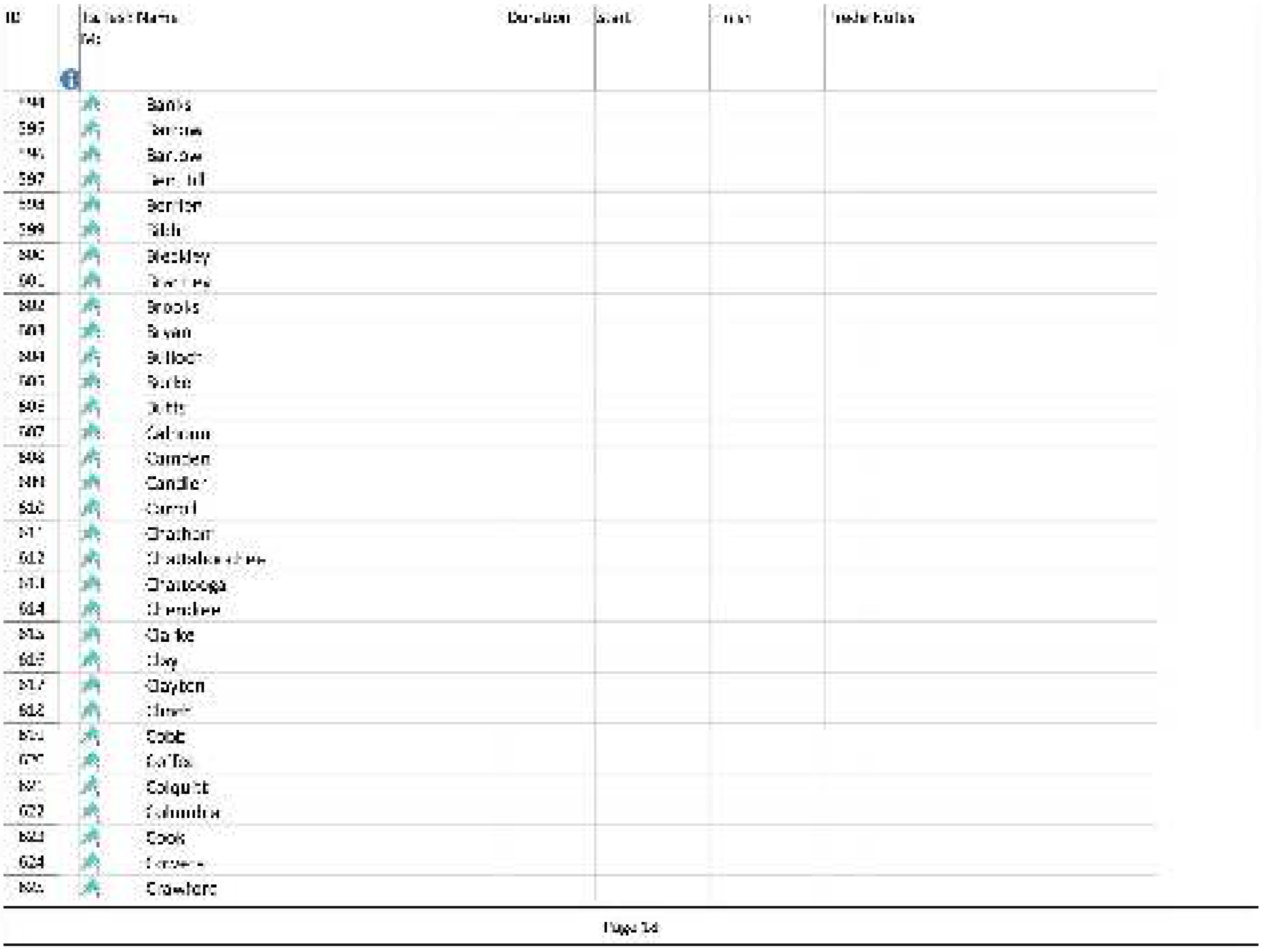

ID	Task Mode	Task Name	Duration	Start	Finish	[illegible]
594		Banks				
595		Barrow				
596		Bartow				
597		Ben Hill				
598		Berrien				
599		Bibb				
600		Bleckley				
601		Brantley				
602		Brooks				
603		Bryan				
604		Bulloch				
605		Burke				
606		Butts				
607		Calhoun				
608		Camden				
609		Candler				
610		Carroll				
611		Chatham				
612		Chattahoochee				
613		Chattooga				
614		Cherokee				
615		Clarke				
616		Clay				
617		Clayton				
618		Clinch				
619		Cobb				
620		Coffee				
621		Colquitt				
622		Columbia				
623		Cook				
624		Coweta				
625		Crawford				

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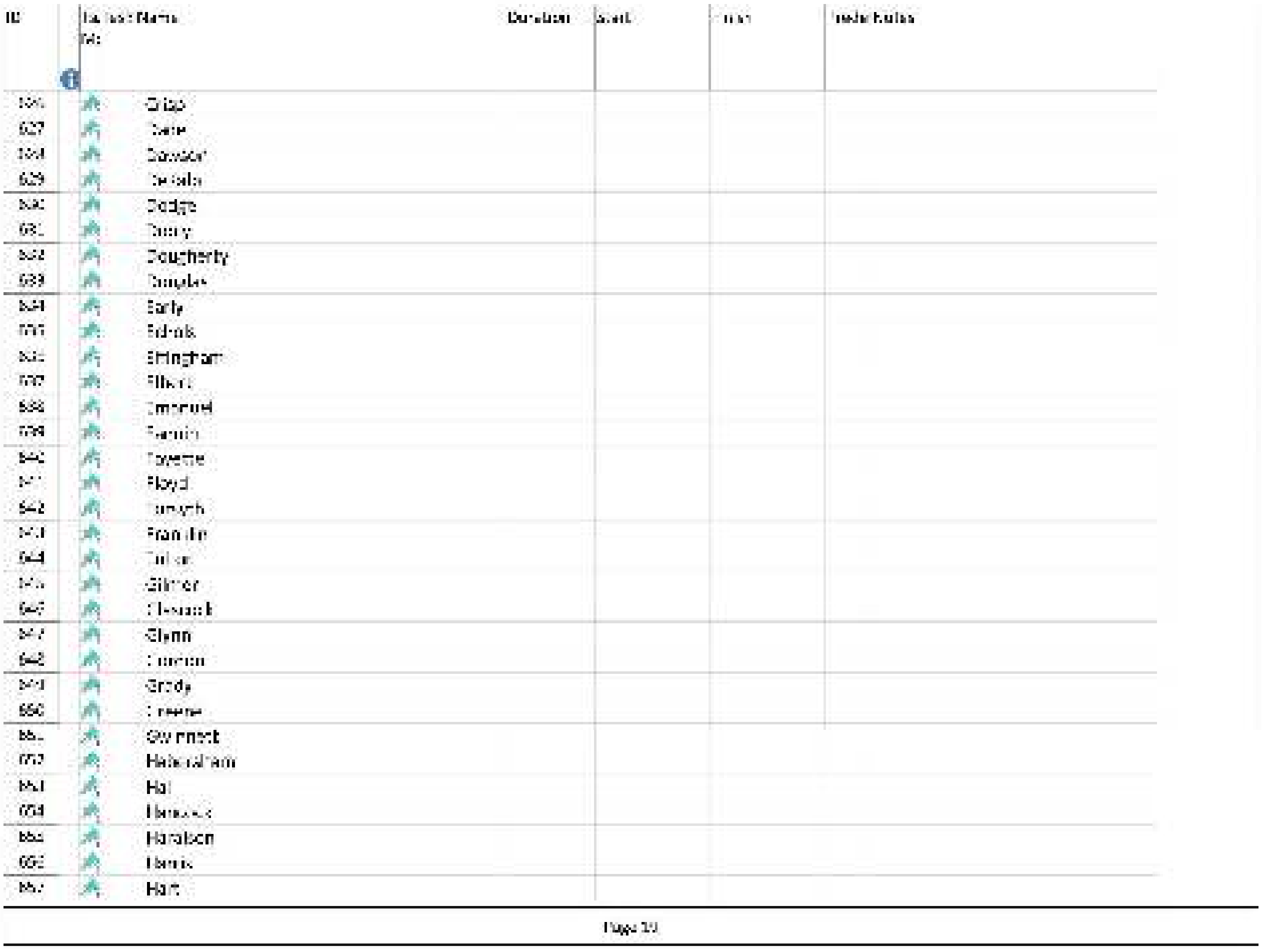

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
626		Crisp				
627		Dade				
628		Dawson				
629		DeKalb				
630		Dodge				
631		Dooly				
632		Dougherty				
633		Douglas				
634		Early				
635		Echols				
636		Effingham				
637		Elbert				
638		Emanuel				
639		Fannin				
640		Fayette				
641		Floyd				
642		Forsyth				
643		Franklin				
644		Fulton				
645		Gilmer				
646		Glascock				
647		Glynn				
648		Gordon				
649		Grady				
650		Greene				
651		Gwinnett				
652		Habersham				
653		Hall				
654		Hancock				
655		Haralson				
656		Harris				
657		Hart				

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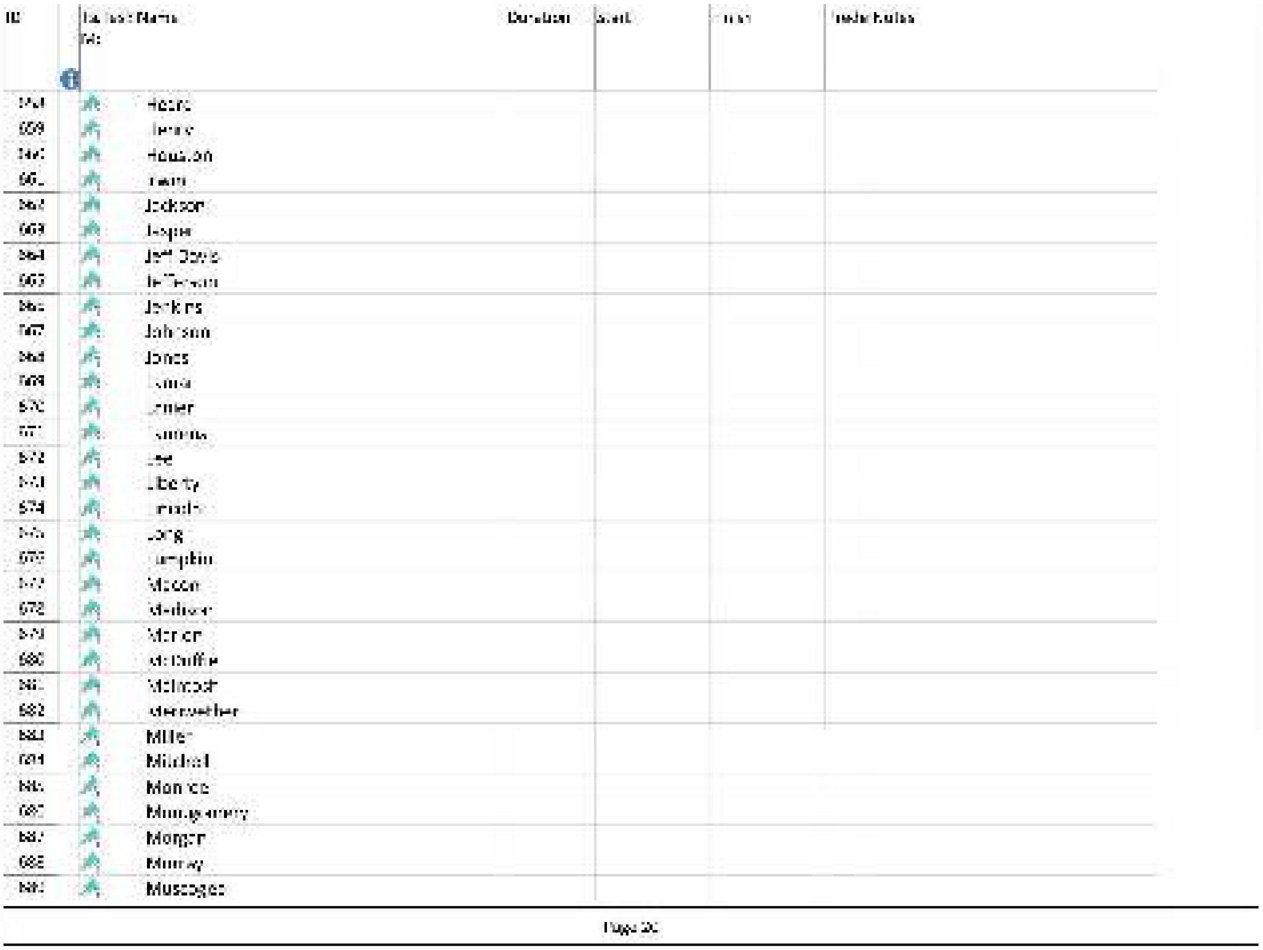

ID	Task Mode	Task Name	Duration	Start	Finish	Resource Names
658		Heard				
659		Henry				
660		Houston				
661		Irwin				
662		Jackson				
663		Jasper				
664		Jeff Davis				
665		Jefferson				
666		Jenkins				
667		Johnson				
668		Jones				
669		Lamar				
670		Lanier				
671		Laurens				
672		Lee				
673		Liberty				
674		Lincoln				
675		Long				
676		Lumpkin				
677		Macon				
678		Madison				
679		Marion				
680		McDuffie				
681		McIntosh				
682		Meriwether				
683		Miller				
684		Mitchell				
685		Monroe				
686		Montgomery				
687		Morgan				
688		Murray				
689		Muscogee				

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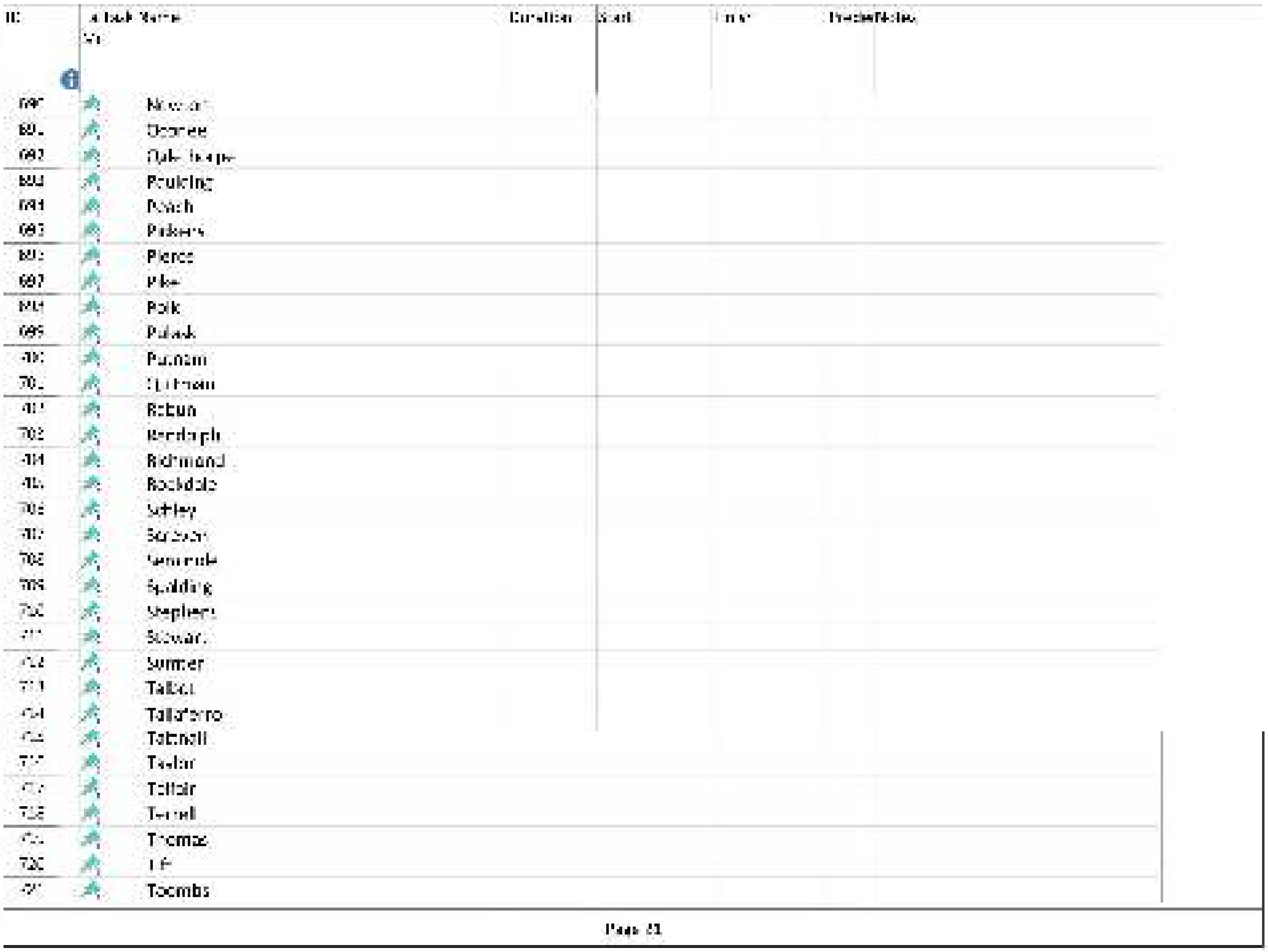

ID	Ta Mo	Task Name	Duration	Start	Finish	Predec	Notes
690		Newton					
691		Oconee					
692		Oglethorpe					
693		Paulding					
694		Peach					
695		Pickens					
696		Pierce					
697		Pike					
698		Polk					
699		Pulaski					
700		Putnam					
701		Quitman					
702		Rabun					
703		Randolph					
704		Richmond					
705		Rockdale					
706		Schley					
707		Screven					
708		Seminole					
709		Spalding					
710		Stephens					
711		Stewart					
712		Sumter					
713		Talbot					
714		Taliaferro					
715		Tattnall					
716		Taylor					
717		Telfair					
718		Terrell					
719		Thomas					
720		Tift					
721		Toombs					

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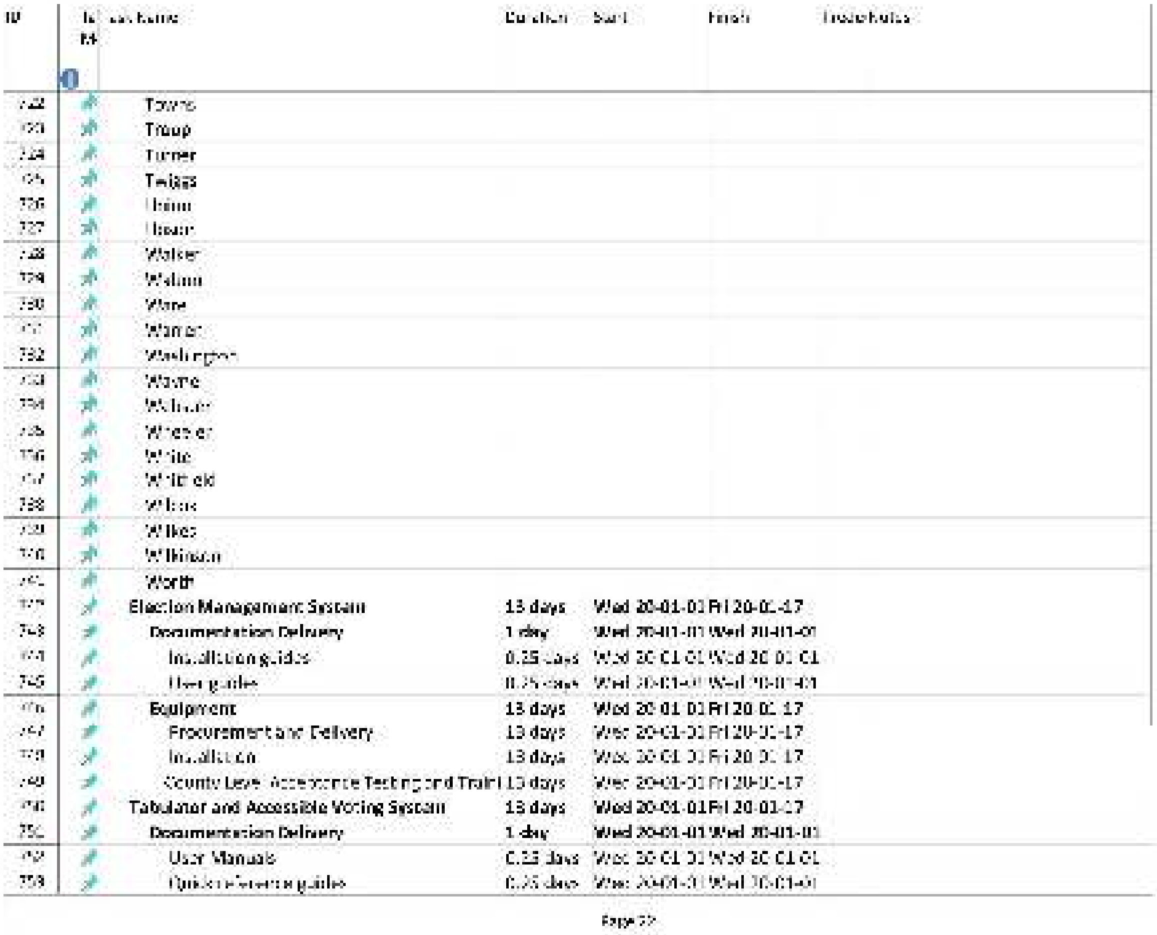

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
722		Towns				
723		Troup				
724		Turner				
725		Twiggs				
726		Union				
727		Upson				
728		Walker				
729		Walton				
730		Ware				
731		Warren				
732		Washington				
733		Wayne				
734		Webster				
735		Wheeler				
736		White				
737		Whitfield				
738		Wilcox				
739		Wilkes				
740		Wilkinson				
741		Worth				
742		**Election Management System**	**13 days**	**Wed 20-01-01**	**Fri 20-01-17**	
743		**Documentation Delivery**	**1 day**	**Wed 20-01-01**	**Wed 20-01-01**	
744		Installation guides	0.25 days	Wed 20-01-01	Wed 20-01-01	
745		User guides	0.25 days	Wed 20-01-01	Wed 20-01-01	
746		**Equipment**	**13 days**	**Wed 20-01-01**	**Fri 20-01-17**	
747		Procurement and Delivery	13 days	Wed 20-01-01	Fri 20-01-17	
748		Installation	13 days	Wed 20-01-01	Fri 20-01-17	
749		County Level Acceptance Testing and Traini	13 days	Wed 20-01-01	Fri 20-01-17	
750		**Tabulator and Accessible Voting System**	**13 days**	**Wed 20-01-01**	**Fri 20-01-17**	
751		**Documentation Delivery**	**1 day**	**Wed 20-01-01**	**Wed 20-01-01**	
752		User Manuals	0.25 days	Wed 20-01-01	Wed 20-01-01	
753		Quick reference guides	0.25 days	Wed 20-01-01	Wed 20-01-01	

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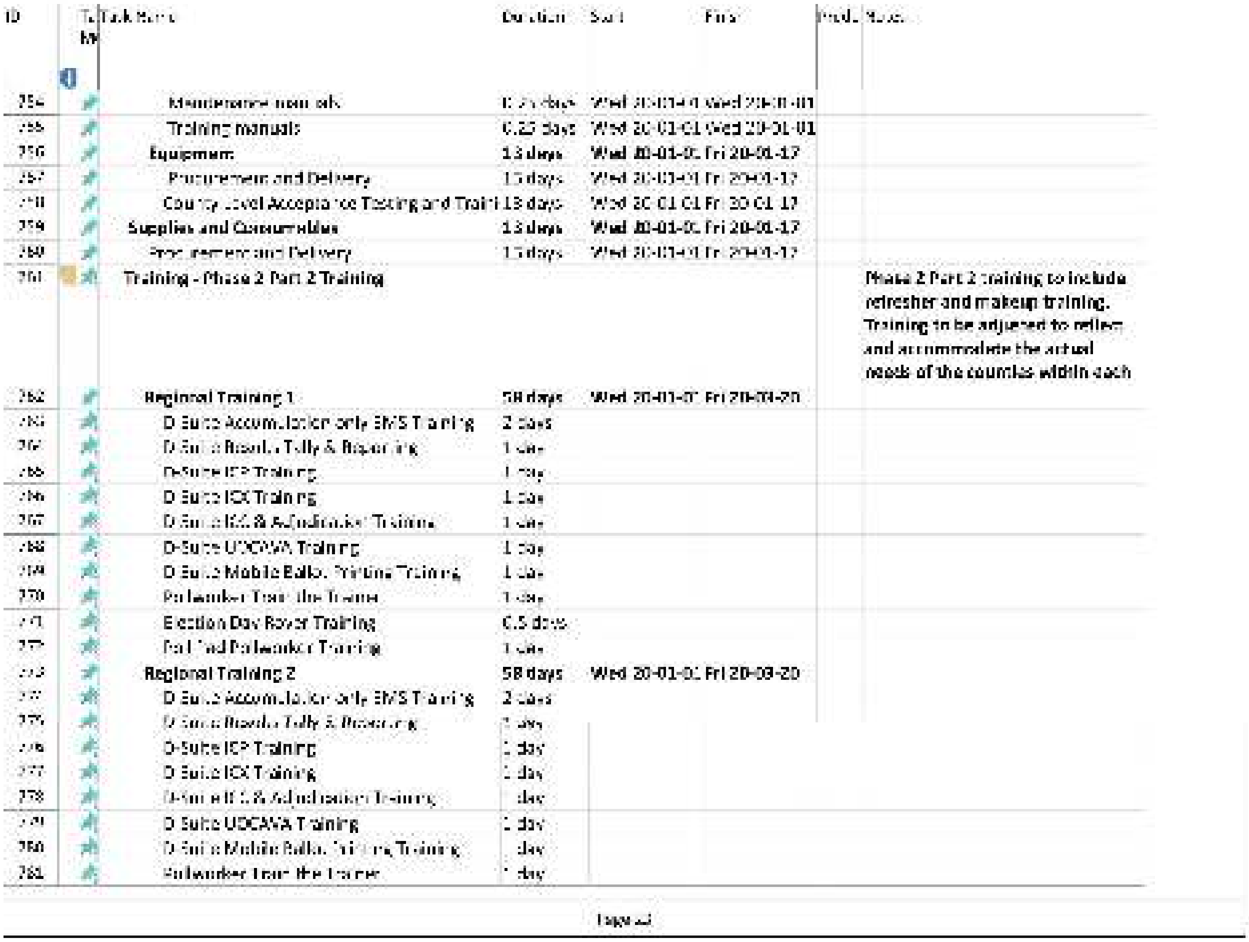

ID	Task Mode	Task Name	Duration	Start	Finish	Pred.	Notes
254		Maintenance manuals	0.25 days	Wed 20-01-01	Wed 20-01-01		
255		Training manuals	0.25 days	Wed 20-01-01	Wed 20-01-01		
256		**Equipment**	**13 days**	**Wed 20-01-01**	**Fri 20-01-17**		
257		Procurement and Delivery	13 days	Wed 20-01-01	Fri 20-01-17		
258		County Level Acceptance Testing and Traini	13 days	Wed 20-01-01	Fri 20-01-17		
259		**Supplies and Consumables**	**13 days**	**Wed 20-01-01**	**Fri 20-01-17**		
260		Procurement and Delivery	13 days	Wed 20-01-01	Fri 20-01-17		
261		**Training - Phase 2 Part 2 Training**					Phase 2 Part 2 training to include refresher and makeup training. Training to be adjusted to reflect and accommodate the actual needs of the counties within each
262		**Regional Training 1**	**58 days**	**Wed 20-01-01**	**Fri 20-03-20**		
263		D-Suite Accumulation only EMS Training	2 days				
264		D-Suite Results Tally & Reporting	1 day				
265		D-Suite ICP Training	1 day				
266		D-Suite ICX Training	1 day				
267		D-Suite ICC & Adjudication Training	1 day				
268		D-Suite UOCAVA Training	1 day				
269		D-Suite Mobile Ballot Printing Training	1 day				
270		Pollworker Train the Trainer	1 day				
271		Election Day Rover Training	0.5 days				
272		Poll Pad Pollworker Training	1 day				
273		**Regional Training 2**	**58 days**	**Wed 20-01-01**	**Fri 20-03-20**		
274		D-Suite Accumulation only EMS Training	2 days				
275		*D-Suite Results Tally & Reporting*	1 day				
276		D-Suite ICP Training	1 day				
277		D-Suite ICX Training	1 day				
278		D-Suite ICC & Adjudication Training	1 day				
279		D-Suite UOCAVA Training	1 day				
280		D-Suite Mobile Ballot Printing Training	1 day				
281		Pollworker Train the Trainer	1 day				

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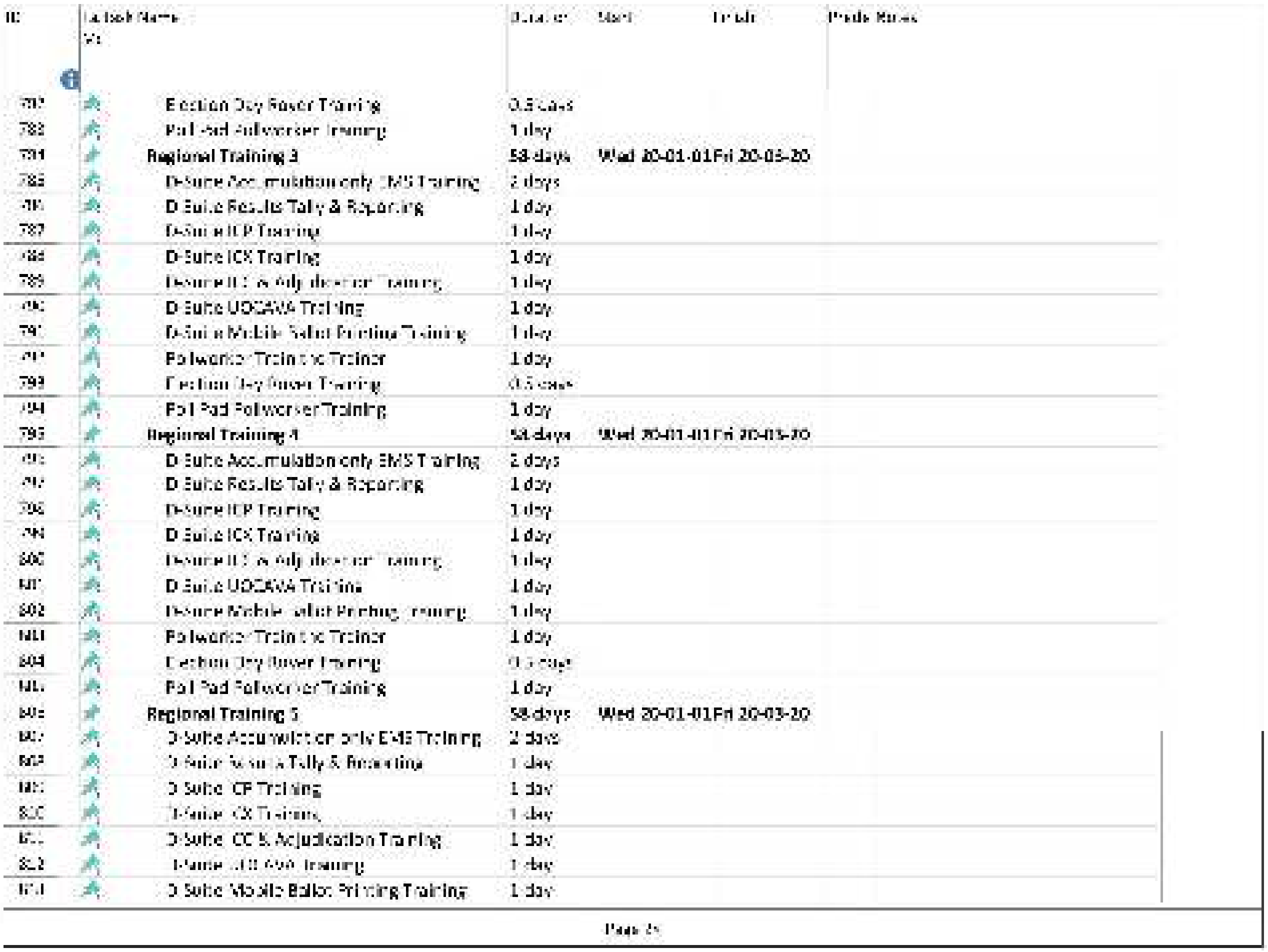

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
782		Election Day Rover Training	0.5 days			
783		Poll Pad Pollworker Training	1 day			
784		**Regional Training 3**	**58 days**	**Wed 20-01-01**	**Fri 20-03-20**	
785		D-Suite Accumulation only EMS Training	2 days			
786		D-Suite Results Tally & Reporting	1 day			
787		D-Suite ICP Training	1 day			
788		D-Suite ICX Training	1 day			
789		D-Suite ICC & Adjudication Training	1 day			
790		D-Suite UOCAVA Training	1 day			
791		D-Suite Mobile Ballot Printing Training	1 day			
792		Pollworker Train the Trainer	1 day			
793		Election Day Rover Training	0.5 days			
794		Poll Pad Pollworker Training	1 day			
795		**Regional Training 4**	**58 days**	**Wed 20-01-01**	**Fri 20-03-20**	
796		D-Suite Accumulation only EMS Training	2 days			
797		D-Suite Results Tally & Reporting	1 day			
798		D-Suite ICP Training	1 day			
799		D-Suite ICX Training	1 day			
800		D-Suite ICC & Adjudication Training	1 day			
801		D-Suite UOCAVA Training	1 day			
802		D-Suite Mobile Ballot Printing Training	1 day			
803		Pollworker Train the Trainer	1 day			
804		Election Day Rover Training	0.5 days			
805		Poll Pad Pollworker Training	1 day			
806		**Regional Training 5**	**58 days**	**Wed 20-01-01**	**Fri 20-03-20**	
807		D-Suite Accumulation only EMS Training	2 days			
808		D-Suite Results Tally & Reporting	1 day			
809		D-Suite ICP Training	1 day			
810		D-Suite ICX Training	1 day			
811		D-Suite ICC & Adjudication Training	1 day			
812		D-Suite UOCAVA Training	1 day			
813		D-Suite Mobile Ballot Printing Training	1 day			

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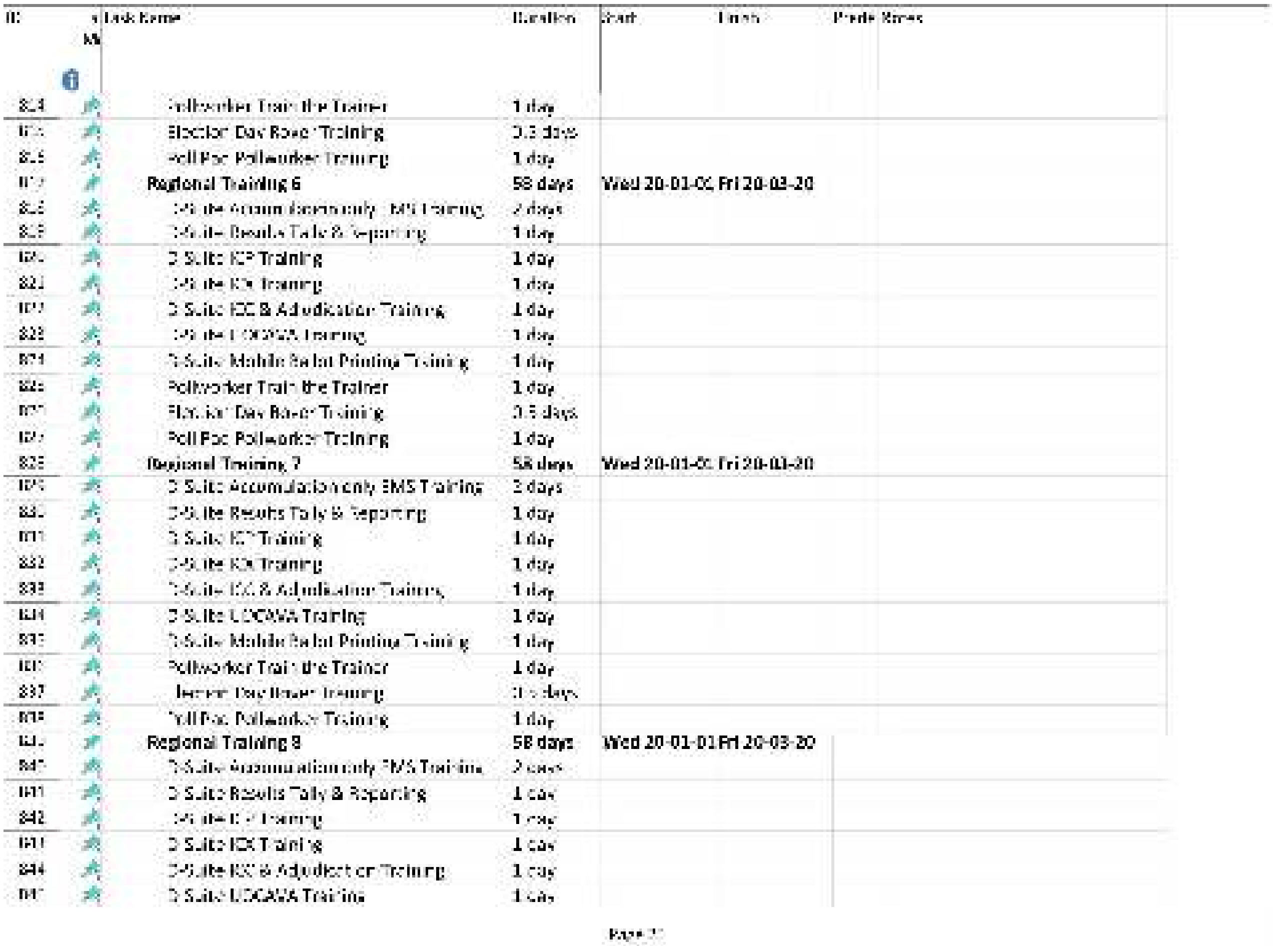

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
814		Pollworker Train the Trainer	1 day			
815		Election Day Rover Training	0.5 days			
816		Poll Pad Pollworker Training	1 day			
817		**Regional Training 6**	**58 days**	**Wed 20-01-0**	**Fri 20-03-20**	
818		D-Suite Accumulation only EMS Training	2 days			
819		D-Suite Results Tally & Reporting	1 day			
820		D-Suite ICP Training	1 day			
821		D-Suite ICX Training	1 day			
822		D-Suite ICC & Adjudication Training	1 day			
823		D-Suite UOCAVA Training	1 day			
824		D-Suite Mobile Ballot Printing Training	1 day			
825		Pollworker Train the Trainer	1 day			
826		Election Day Rover Training	0.5 days			
827		Poll Pad Pollworker Training	1 day			
828		**Regional Training 7**	**58 days**	**Wed 20-01-0**	**Fri 20-03-20**	
829		D-Suite Accumulation only EMS Training	2 days			
830		D-Suite Results Tally & Reporting	1 day			
831		D-Suite ICP Training	1 day			
832		D-Suite ICX Training	1 day			
833		D-Suite ICC & Adjudication Training	1 day			
834		D-Suite UOCAVA Training	1 day			
835		D-Suite Mobile Ballot Printing Training	1 day			
836		Pollworker Train the Trainer	1 day			
837		Election Day Rover Training	0.5 days			
838		Poll Pad Pollworker Training	1 day			
839		**Regional Training 8**	**58 days**	**Wed 20-01-01**	**Fri 20-03-20**	
840		D-Suite Accumulation only EMS Training	2 days			
841		D-Suite Results Tally & Reporting	1 day			
842		D-Suite ICP Training	1 day			
843		D-Suite ICX Training	1 day			
844		D-Suite ICC & Adjudication Training	1 day			
845		D-Suite UOCAVA Training	1 day			

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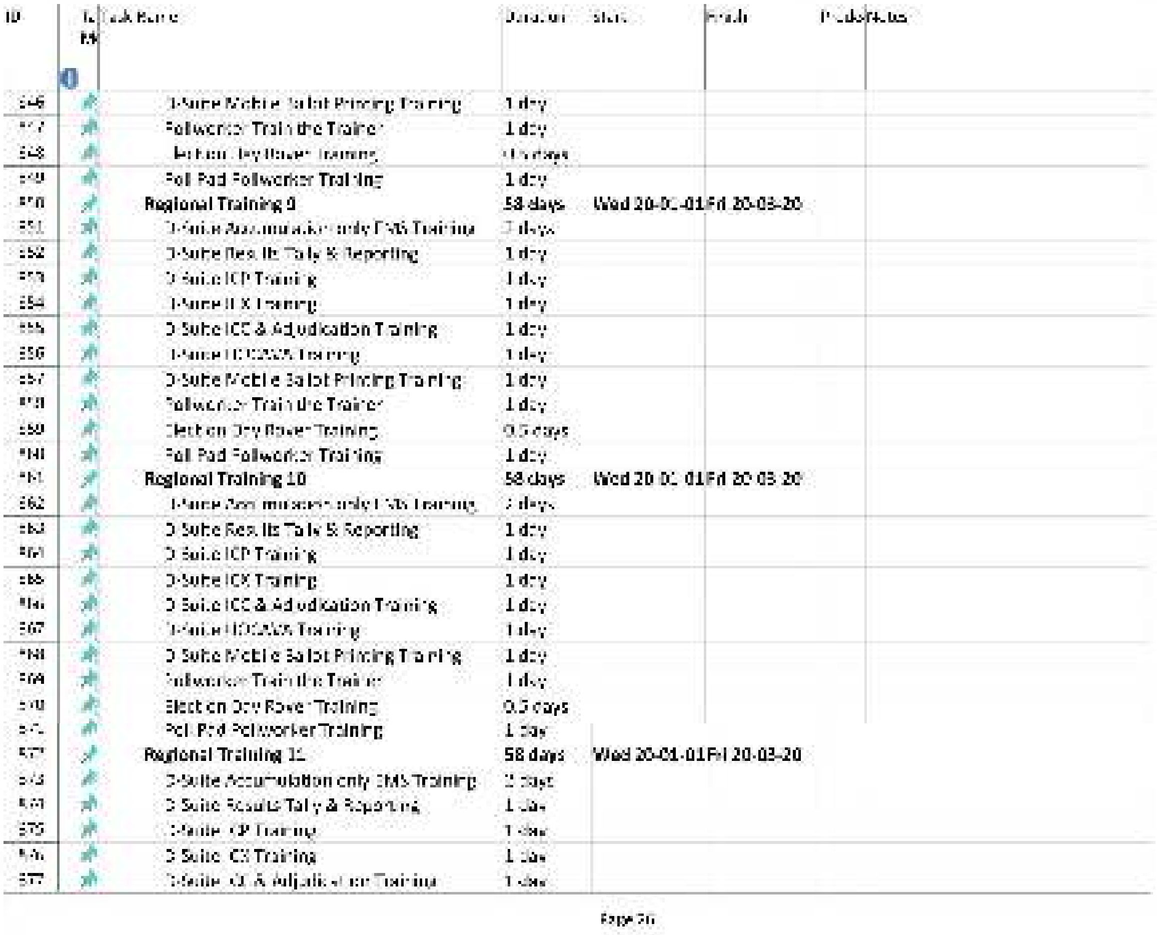

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Notes
546		D-Suite Mobile Ballot Printing Training	1 day				
547		Pollworker Train the Trainer	1 day				
548		Election Day Rover Training	0.5 days				
549		Poll Pad Pollworker Training	1 day				
550		**Regional Training 9**	**58 days**	**Wed 20-01-01**	**Fri 20-03-20**		
551		D-Suite Accumulation only EMS Training	2 days				
552		D-Suite Results Tally & Reporting	1 day				
553		D-Suite ICP Training	1 day				
554		D-Suite ICX Training	1 day				
555		D-Suite ICC & Adjudication Training	1 day				
556		D-Suite ICC/AVA Training	1 day				
557		D-Suite Mobile Ballot Printing Training	1 day				
558		Pollworker Train the Trainer	1 day				
559		Election Day Rover Training	0.5 days				
560		Poll Pad Pollworker Training	1 day				
561		**Regional Training 10**	**58 days**	**Wed 20-01-01**	**Fri 20-03-20**		
562		D-Suite Accumulation only EMS Training	2 days				
563		D-Suite Results Tally & Reporting	1 day				
564		D-Suite ICP Training	1 day				
565		D-Suite ICX Training	1 day				
566		D-Suite ICC & Adjudication Training	1 day				
567		D-Suite ICC/AVA Training	1 day				
568		D-Suite Mobile Ballot Printing Training	1 day				
569		Pollworker Train the Trainer	1 day				
570		Election Day Rover Training	0.5 days				
571		Poll Pad Pollworker Training	1 day				
572		**Regional Training 11**	**58 days**	**Wed 20-01-01**	**Fri 20-03-20**		
573		D-Suite Accumulation only EMS Training	2 days				
574		D-Suite Results Tally & Reporting	1 day				
575		D-Suite ICP Training	1 day				
576		D-Suite ICX Training	1 day				
577		D-Suite ICC & Adjudication Training	1 day				

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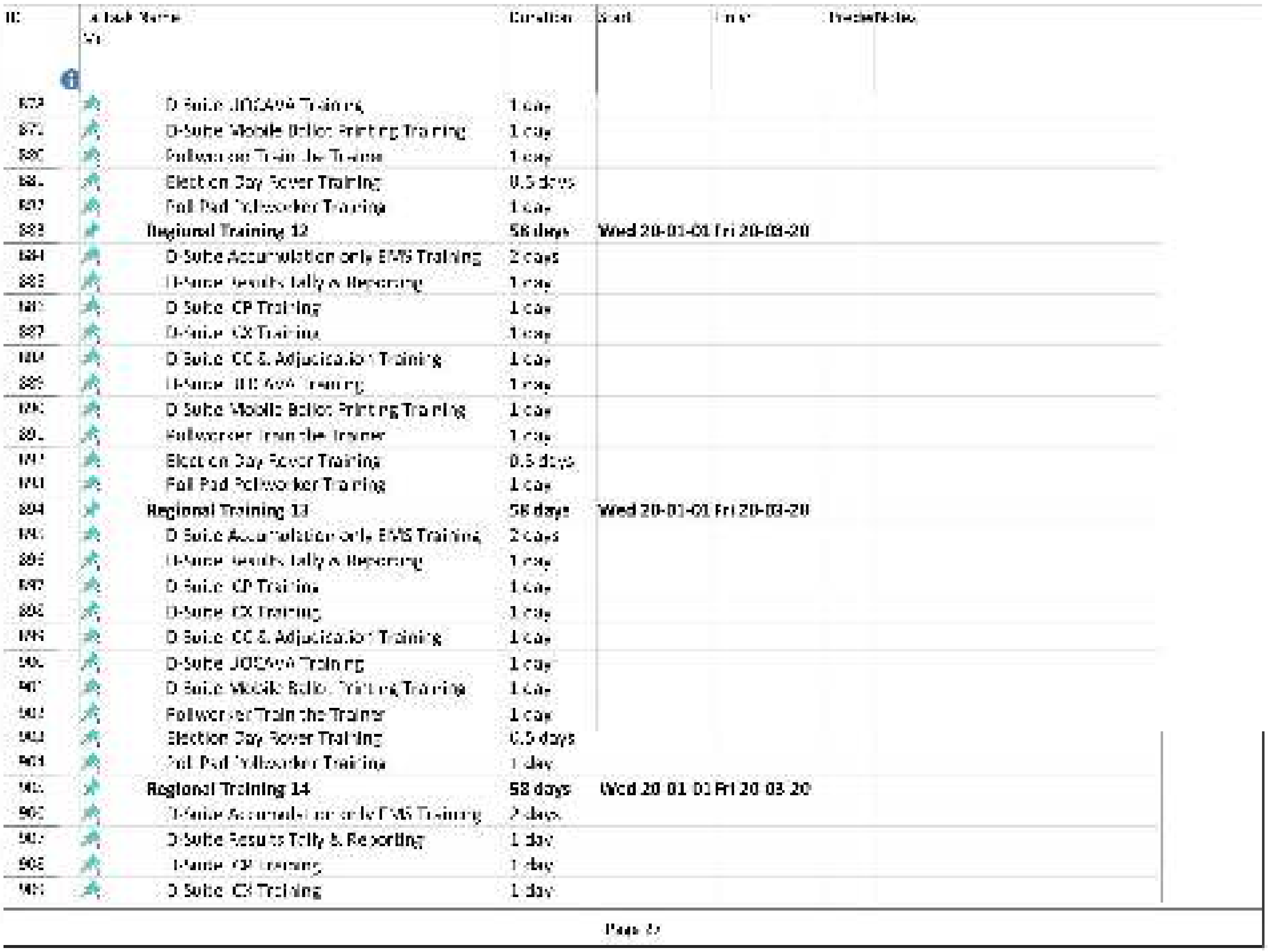

ID	Task Name	Duration	Start	Finish	Prede	Notes
878	D-Suite UOCAVA Training	1 day				
879	D-Suite Mobile Ballot Printing Training	1 day				
880	Pollworker Train the Trainer	1 day				
881	Election Day Rover Training	0.5 days				
882	Poll Pad Pollworker Training	1 day				
883	**Regional Training 12**	**58 days**	**Wed 20-01-01**	**Fri 20-03-20**		
884	D-Suite Accumulation only EMS Training	2 days				
885	D-Suite Results Tally & Reporting	1 day				
886	D-Suite ICP Training	1 day				
887	D-Suite ICX Training	1 day				
888	D-Suite ICC & Adjudication Training	1 day				
889	D-Suite UOCAVA Training	1 day				
890	D-Suite Mobile Ballot Printing Training	1 day				
891	Pollworker Train the Trainer	1 day				
892	Election Day Rover Training	0.5 days				
893	Poll Pad Pollworker Training	1 day				
894	**Regional Training 13**	**58 days**	**Wed 20-01-01**	**Fri 20-03-20**		
895	D-Suite Accumulation only EMS Training	2 days				
896	D-Suite Results Tally & Reporting	1 day				
897	D-Suite ICP Training	1 day				
898	D-Suite ICX Training	1 day				
899	D-Suite ICC & Adjudication Training	1 day				
900	D-Suite UOCAVA Training	1 day				
901	D-Suite Mobile Ballot Printing Training	1 day				
902	Pollworker Train the Trainer	1 day				
903	Election Day Rover Training	0.5 days				
904	Poll Pad Pollworker Training	1 day				
905	**Regional Training 14**	**58 days**	**Wed 20-01-01**	**Fri 20-03-20**		
906	D-Suite Accumulation only EMS Training	2 days				
907	D-Suite Results Tally & Reporting	1 day				
908	D-Suite ICP Training	1 day				
909	D-Suite ICX Training	1 day				

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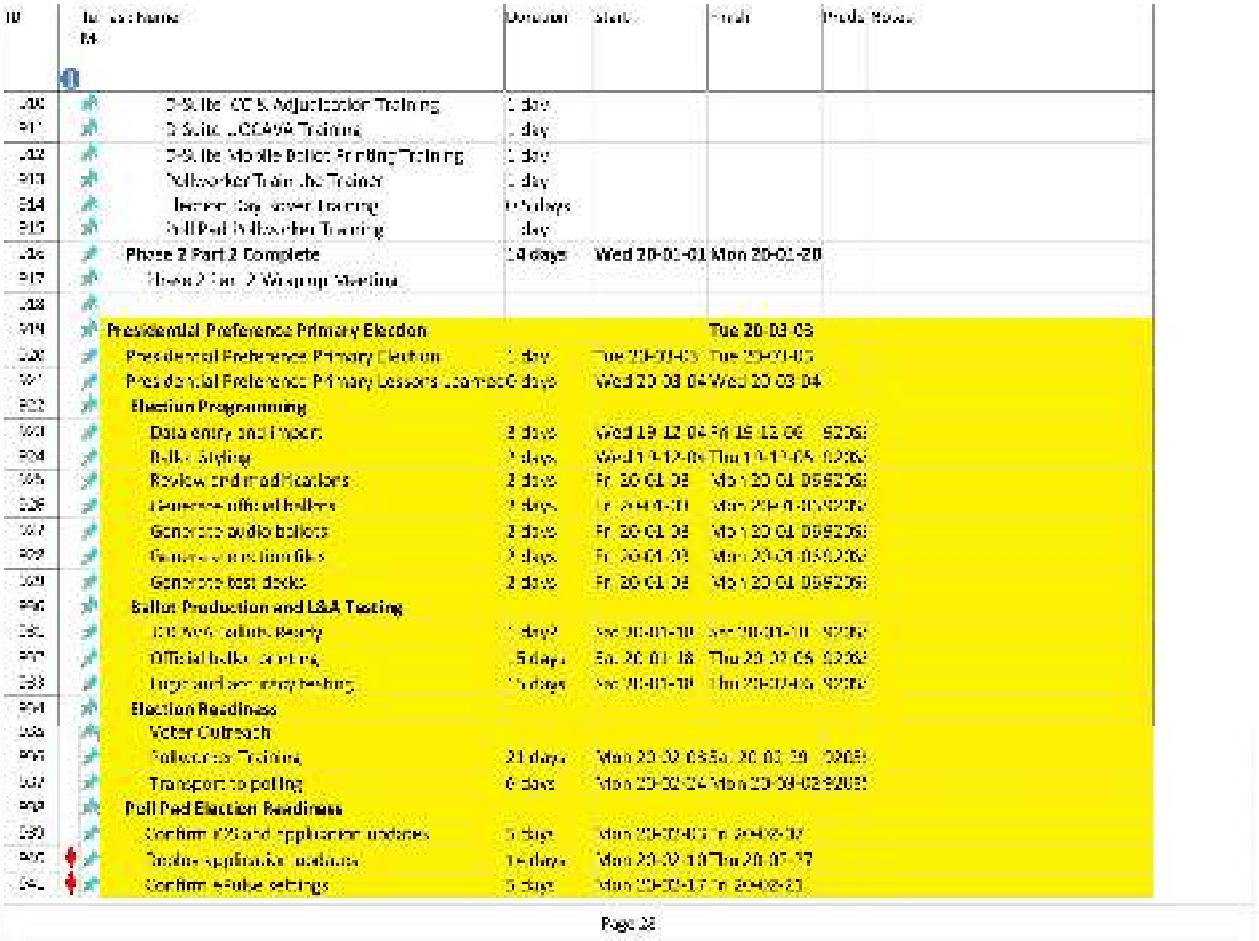

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
210		D-Suite ICC & Adjudication Training	1 day			
211		D-Suite UOCAVA Training	1 day			
212		D-Suite Mobile Ballot Printing Training	1 day			
213		Pollworker Train the Trainer	1 day			
214		Election Day Rover Training	0.5 days			
215		Poll Pad Pollworker Training	1 day			
216		**Phase 2 Part 2 Complete**	**14 days**	**Wed 20-01-01**	**Mon 20-01-20**	
217		Phase 2 Part 2 Wrapup Meeting				
218						
219		**Presidential Preference Primary Election**			**Tue 20-03-03**	
220		Presidential Preference Primary Election	1 day	Tue 20-03-03	Tue 20-03-03	
221		Presidential Preference Primary Lessons Learned	0 days	Wed 20-03-04	Wed 20-03-04	
222		**Election Programming**				
223		Data entry and import	3 days	Wed 19-12-04	Fri 19-12-06	9206
224		Ballot Styling	2 days	Wed 19-12-04	Thu 19-12-05	9206
225		Review and modifications	2 days	Fri 20-01-03	Mon 20-01-06	9206
226		Generate official ballots	2 days	Fri 20-01-03	Mon 20-01-06	9206
227		Generate audio ballots	2 days	Fri 20-01-03	Mon 20-01-06	9206
228		Generate election files	2 days	Fri 20-01-03	Mon 20-01-06	9206
229		Generate test decks	2 days	Fri 20-01-03	Mon 20-01-06	9206
230		**Ballot Production and L&A Testing**				
231		UOCAVA Ballots Ready	1 day?	Sat 20-01-18	Sat 20-01-18	9206
232		Official ballot printing	15 days	Sat 20-01-18	Thu 20-02-06	9206
233		Logic and accuracy testing	15 days	Sat 20-01-18	Thu 20-02-06	9206
234		**Election Readiness**				
235		Voter Outreach				
236		Pollworker Training	21 days	Mon 20-02-03	Sat 20-02-29	9206
237		Transport to polling	6 days	Mon 20-02-24	Mon 20-03-02	9206
238		**Poll Pad Election Readiness**				
239		Confirm iOS and application updates	5 days	Mon 20-02-03	Fri 20-02-07	
240		Deploy application updates	14 days	Mon 20-02-10	Thu 20-02-27	
241		Confirm ePulse settings	5 days	Mon 20-02-17	Fri 20-02-21	

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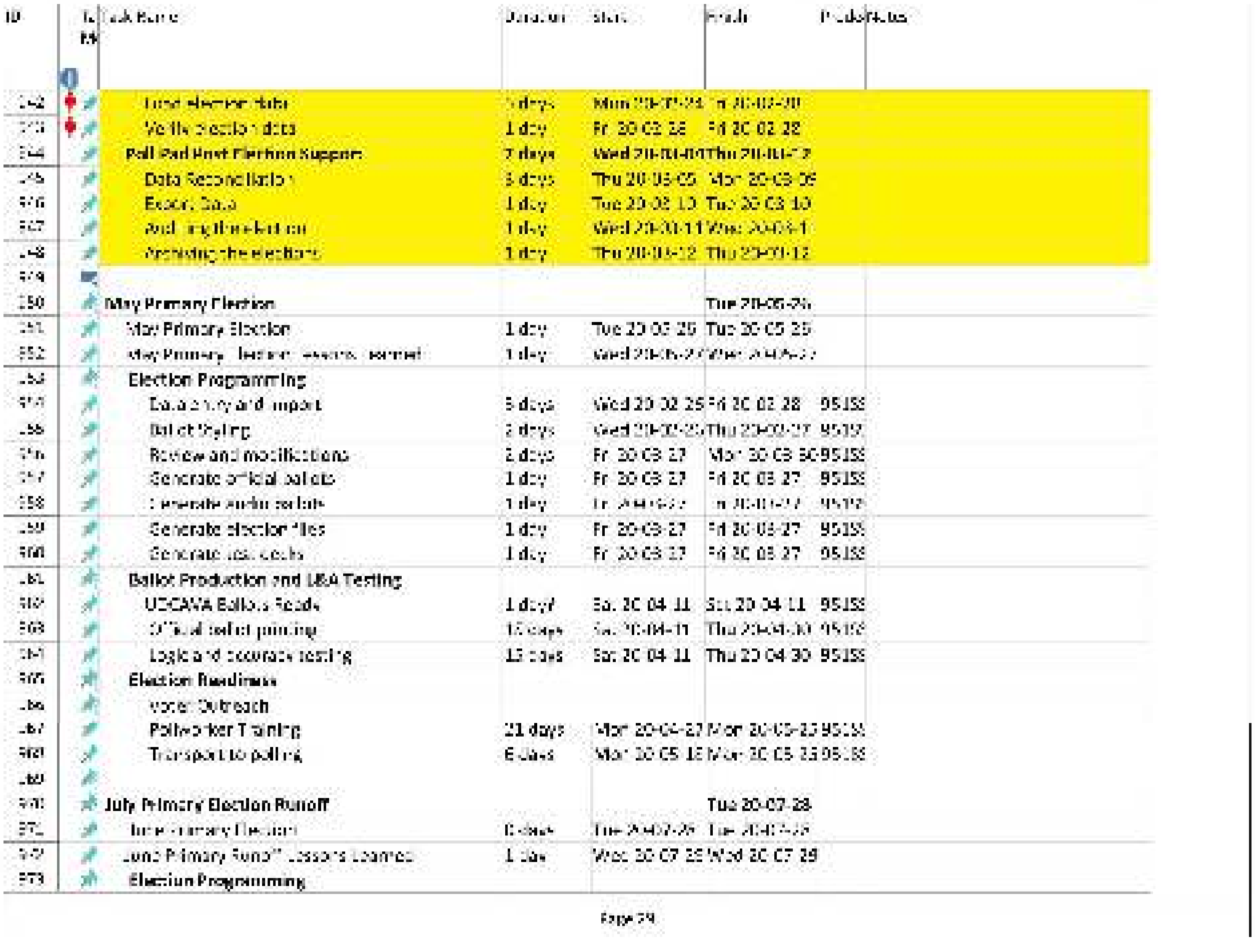

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Notes
242		Load election data	5 days	Mon 20-02-24	Fri 20-02-28		
243		Verify election data	1 day	Fri 20-02-28	Fri 20-02-28		
244		**Poll Pad Post Election Support**	7 days	Wed 20-03-04	Thu 20-03-12		
245		Data Reconciliation	3 days	Thu 20-03-05	Mon 20-03-09		
246		Export Data	1 day	Tue 20-03-10	Tue 20-03-10		
247		Auditing the election	1 day	Wed 20-03-11	Wed 20-03-11		
248		Archiving the Elections	1 day	Thu 20-03-12	Thu 20-03-12		
249							
250		**May Primary Election**			Tue 20-05-26		
251		May Primary Election	1 day	Tue 20-05-26	Tue 20-05-26		
252		May Primary Election Lessons Learned	1 day	Wed 20-05-27	Wed 20-05-27		
253		**Election Programming**					
254		Data entry and import	3 days	Wed 20-03-25	Fri 20-03-27	95SS	
255		Ballot Styling	2 days	Wed 20-03-25	Thu 20-03-26	95SS	
256		Review and modifications	2 days	Fri 20-03-27	Mon 20-03-30	95SS	
257		Generate official ballots	1 day	Fri 20-03-27	Fri 20-03-27	95SS	
258		Generate audio ballots	1 day	Fri 20-03-27	Fri 20-03-27	95SS	
259		Generate election files	1 day	Fri 20-03-27	Fri 20-03-27	95SS	
260		Generate test decks	1 day	Fri 20-03-27	Fri 20-03-27	95SS	
261		**Ballot Production and L&A Testing**					
262		UOCAVA Ballots Ready	1 day?	Sat 20-04-11	Sat 20-04-11	95SS	
263		Official ballot printing	15 days	Sat 20-04-11	Thu 20-04-30	95SS	
264		Logic and accuracy testing	15 days	Sat 20-04-11	Thu 20-04-30	95SS	
265		**Election Readiness**					
266		Voter Outreach					
267		Pollworker Training	21 days	Mon 20-04-27	Mon 20-05-25	95SS	
268		Transport to polling	6 days	Mon 20-05-18	Mon 20-05-25	95SS	
269							
270		**July Primary Election Runoff**			Tue 20-07-28		
271		June Primary Election	0 days	Tue 20-07-28	Tue 20-07-28		
272		June Primary Runoff Lessons Learned	1 day	Wed 20-07-29	Wed 20-07-29		
273		**Election Programming**					

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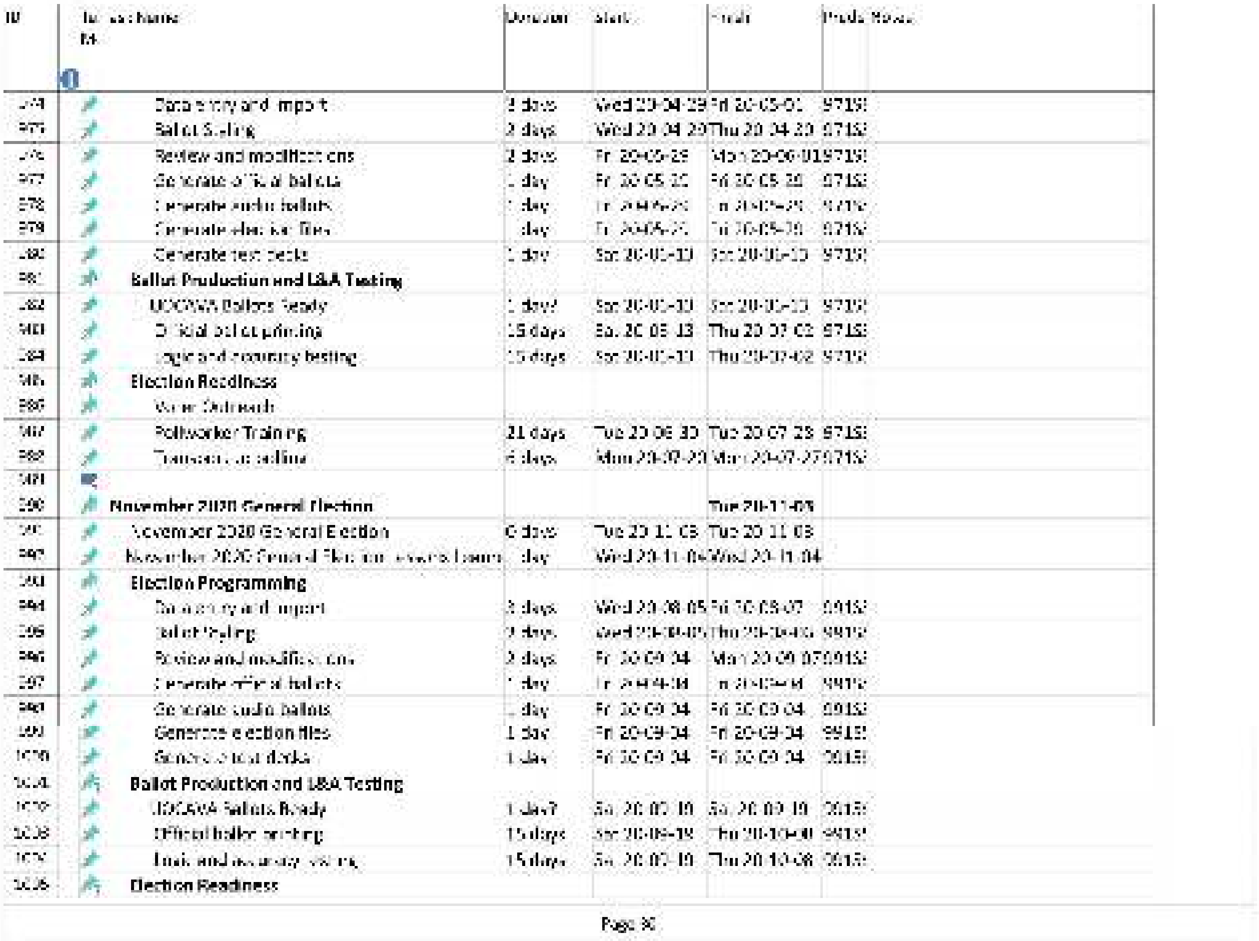

ID	Task Mode	Task Name	Duration	Start	Finish	Preds	Notes
974		Data entry and import	3 days	Wed 20-04-29	Fri 20-05-01	9715	
975		Ballot Styling	2 days	Wed 20-04-29	Thu 20-04-30	9715	
976		Review and modifications	2 days	Fri 20-05-29	Mon 20-06-01	9715	
977		Generate official ballots	1 day	Fri 20-05-29	Fri 20-05-29	9715	
978		Generate audio ballots	1 day	Fri 20-05-29	Fri 20-05-29	9715	
979		Generate election files	1 day	Fri 20-05-29	Fri 20-05-29	9715	
980		Generate test decks	1 day	Sat 20-06-13	Sat 20-06-13	9715	
981		**Ballot Production and L&A Testing**					
982		UOCAVA Ballots Ready	1 day?	Sat 20-06-13	Sat 20-06-13	9715	
983		Official ballot printing	15 days	Sat 20-06-13	Thu 20-07-02	9715	
984		Logic and accuracy testing	15 days	Sat 20-06-13	Thu 20-07-02	9715	
985		**Election Readiness**					
986		Voter Outreach					
987		Pollworker Training	21 days	Tue 20-06-30	Tue 20-07-28	9715	
988		Transport scheduling	6 days	Mon 20-07-20	Mon 20-07-27	9715	
989							
990		**November 2020 General Election**			Tue 20-11-03		
991		November 2020 General Election	0 days	Tue 20-11-03	Tue 20-11-03		
992		November 2020 General Election Canvass Board	1 day	Wed 20-11-04	Wed 20-11-04		
993		**Election Programming**					
994		Data entry and import	3 days	Wed 20-08-05	Fri 20-08-07	9915	
995		Ballot Styling	2 days	Wed 20-08-05	Thu 20-08-06	9915	
996		Review and modifications	2 days	Fri 20-09-04	Mon 20-09-07	9915	
997		Generate official ballots	1 day	Fri 20-09-04	Fri 20-09-04	9915	
998		Generate audio ballots	1 day	Fri 20-09-04	Fri 20-09-04	9915	
999		Generate election files	1 day	Fri 20-09-04	Fri 20-09-04	9915	
1000		Generate test decks	1 day	Fri 20-09-04	Fri 20-09-04	9915	
1001		**Ballot Production and L&A Testing**					
1002		UOCAVA Ballots Ready	1 day?	Sat 20-09-19	Sat 20-09-19	9915	
1003		Official ballot printing	15 days	Sat 20-09-19	Thu 20-10-08	9915	
1004		Logic and accuracy testing	15 days	Sat 20-09-19	Thu 20-10-08	9915	
1005		**Election Readiness**					

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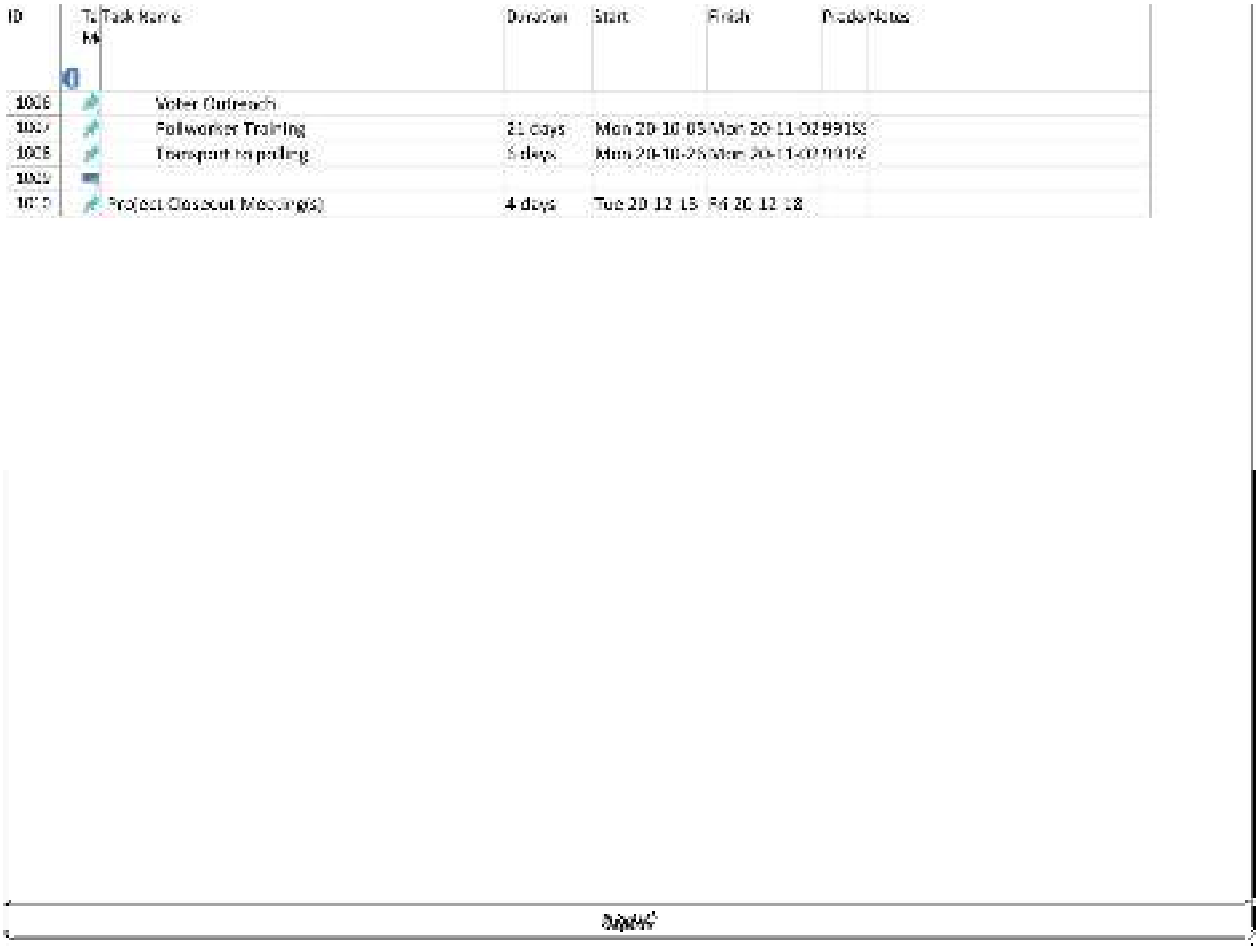

ID	Ta Mo	Task Name	Duration	Start	Finish	Prede	Notes
1006		Voter Outreach					
1007		Pollworker Training	21 days	Mon 20-10-05	Mon 20-11-02	99153	
1008		Transport to polling	5 days	Mon 20-10-26	Mon 20-11-02	99152	
1009							
1010		Project Closeout Meeting(s)	4 days	Tue 20-12-15	Fri 20-12-18		

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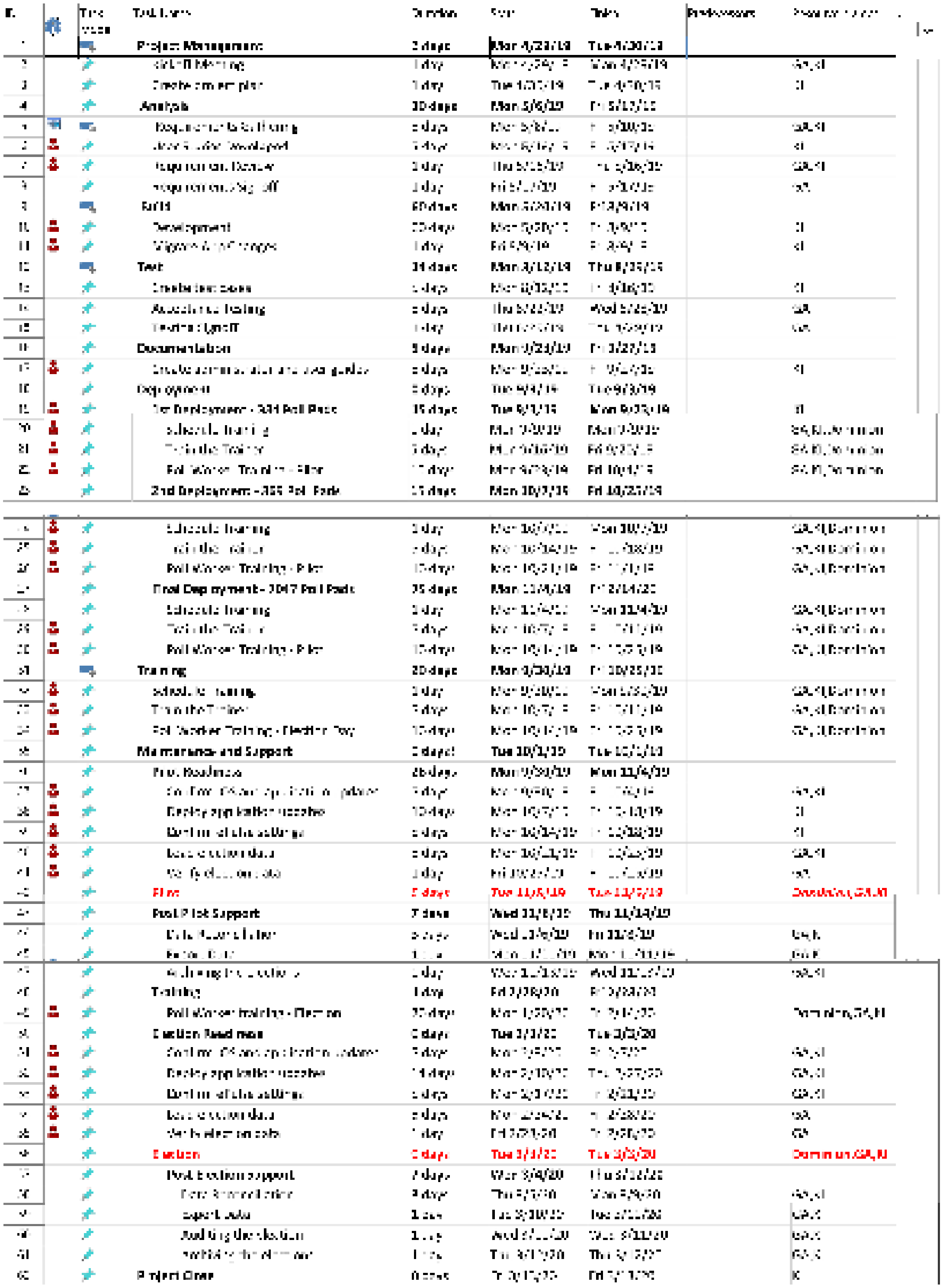
KNOWiNK’s Project Plan



ID	Task Name	Duration	Start	Finish	Predecessors	Resource Names
1	**Project Management**	2 days	Mon 4/29/19	Tue 4/30/19		
2	Kickoff Meeting	1 day	Mon 4/29/19	Mon 4/29/19		GA,KI
3	Create project plan	1 day	Tue 4/30/19	Tue 4/30/19		KI
4	**Analysis**	10 days	Mon 5/6/19	Fri 5/17/19		
5	Requirements Gathering	5 days	Mon 5/6/19	Fri 5/10/19		GA,KI
6	User Stories Developed	5 days	Mon 5/13/19	Fri 5/17/19		KI
7	Requirements Review	1 day	Thu 5/16/19	Thu 5/16/19		GA,KI
8	Requirements Sign off	1 day	Fri 5/17/19	Fri 5/17/19		GA
9	**Build**	60 days	Mon 5/20/19	Fri 8/9/19		
10	Development	55 days	Mon 5/20/19	Fri 8/2/19		KI
11	Migrate App Changes	1 day	Fri 8/9/19	Fri 8/9/19		KI
12	**Test**	14 days	Mon 8/12/19	Thu 8/29/19		
13	Create test cases	5 days	Mon 8/12/19	Fri 8/16/19		KI
14	Acceptance Testing	5 days	Thu 8/22/19	Wed 8/28/19		GA
15	Testing Signoff	1 day	Thu 8/29/19	Thu 8/29/19		GA
16	**Documentation**	5 days	Mon 9/23/19	Fri 9/27/19		
17	Create administrator and user guides	5 days	Mon 9/23/19	Fri 9/27/19		KI
18	Deployment	5 days	Tue 9/3/19	Tue 9/3/19		
19	1st Deployment - 334 Poll Pads	15 days	Tue 9/3/19	Mon 9/23/19		KI
20	Schedule Training	1 day	Mon 9/9/19	Mon 9/9/19		GA,KI,Dominion
21	Train the Trainer	5 days	Mon 9/16/19	Fri 9/20/19		GA,KI,Dominion
22	Poll Worker Training - Pilot	10 days	Mon 9/23/19	Fri 10/4/19		GA,KI,Dominion
23	2nd Deployment - 355 Poll Pads	15 days	Mon 10/7/19	Fri 10/25/19		
24	Schedule Training	1 day	Mon 10/7/19	Mon 10/7/19		GA,KI,Dominion
25	Train the Trainer	5 days	Mon 10/14/19	Fri 10/18/19		GA,KI,Dominion
26	Poll Worker Training - Pilot	10 days	Mon 10/21/19	Fri 11/1/19		GA,KI,Dominion
27	Final Deployment - 2047 Poll Pads	75 days	Mon 11/4/19	Fri 2/14/20		
28	Schedule Training	1 day	Mon 11/4/19	Mon 11/4/19		GA,KI,Dominion
29	Train the Trainer	5 days	Mon 10/7/19	Fri 10/11/19		GA,KI,Dominion
30	Poll Worker Training - Pilot	10 days	Mon 10/14/19	Fri 10/25/19		GA,KI,Dominion
31	**Training**	20 days	Mon 9/30/19	Fri 10/25/19		
32	Schedule Training	1 day	Mon 9/30/19	Mon 9/30/19		GA,KI,Dominion
33	Train the Trainer	5 days	Mon 10/7/19	Fri 10/11/19		GA,KI,Dominion
34	Poll Worker Training - Election Day	10 days	Mon 10/14/19	Fri 10/25/19		GA,KI,Dominion
35	**Maintenance and Support**	0 days?	Tue 10/1/19	Tue 10/1/19		
36	Pilot Readiness	26 days	Mon 9/30/19	Mon 11/4/19		
37	Confirm OS and application updates	5 days	Mon 9/30/19	Fri 10/4/19		GA,KI
38	Deploy application updates	10 days	Mon 10/7/19	Fri 10/18/19		KI
39	Confirm all the settings	5 days	Mon 10/14/19	Fri 10/18/19		KI
40	Load election data	5 days	Mon 10/21/19	Fri 10/25/19		GA,KI
41	Verify election data	1 day	Fri 10/25/19	Fri 10/25/19		GA
42	Pilot	2 days	Tue 11/5/19	Tue 11/5/19		Dominion,GA,KI
43	Post Pilot Support	7 days	Wed 11/6/19	Thu 11/14/19		
44	Data Reconciliation	3 days	Wed 11/6/19	Fri 11/8/19		GA,KI
45	Export Data	1 day	Mon 11/11/19	Mon 11/11/19		GA,KI
46	Archiving the elections	1 day	Wed 11/13/19	Wed 11/13/19		GA,KI
47	Training	1 day	Fri 2/28/20	Fri 2/28/20		
48	Poll Worker Training - Election	20 days	Mon 1/20/20	Fri 2/14/20		Dominion,GA,KI
50	Election Readiness	0 days	Tue 3/3/20	Tue 3/3/20		
51	Confirm OS and application updates	5 days	Mon 2/3/20	Fri 2/7/20		GA,KI
52	Deploy application updates	14 days	Mon 2/10/20	Thu 2/27/20		GA,KI
53	Confirm all the settings	5 days	Mon 2/17/20	Fri 2/21/20		GA,KI
54	Load election data	5 days	Mon 2/24/20	Fri 2/28/20		GA
55	Verify election data	1 day	Fri 2/28/20	Fri 2/28/20		GA
56	Election	0 days	Tue 3/3/20	Tue 3/3/20		Dominion,GA,KI
57	Post Election support	7 days	Wed 3/4/20	Thu 3/12/20		
58	Data Reconciliation	4 days	Thu 3/5/20	Mon 3/9/20		GA,KI
59	Export Data	1 day	Tue 3/10/20	Tue 3/10/20		GA,KI
60	Auditing the election	1 day	Wed 3/11/20	Wed 3/11/20		GA,KI
61	Archiving the elections	1 day	Thu 3/12/20	Thu 3/12/20		GA,KI
62	**Project Close**	0 days	Fri 3/13/20	Fri 3/13/20		KI

KNOWiNK

A proposed project plan is detailed in the Section above as part of a coordinated effort with Dominion to implement and roll-out ePollbooks.

Jurisdiction	Scheduled Implementation	**Actual Implementation**	**Number of Registered Voters**	**Number of Poll Pads**
State of Rhode Island	Pilot Phase: October 2015 to September 2016	Pilot Phase: October 2015 to September 2016	766,625	Pilot Phase: 200
	Phase Two: January 2018 to September 2018	Second Phase: January 2018 to September 2018		Phase Two: 1,700
Washington, D.C.	Phase One: March 2016 to June 2016	Phase One: March 2016 to June 2016	617,164	Phase One: 600
	Phase Two: July 2016 to November 2016	Phase Two: July 2016 to November 2016		Phase Two: 900
City of Boston, Massachusetts	August 2016 to November 2016	August 2016 to November 2016	418,476	30 at 28 early voting centers
Hennepin County, Minnesota	Phase One: March 2016 to February 2017	Phase One: March 2016 to February 2017	780,000	Phase One: 1,100
	Phase Two: May 2017 to November 2017	Phase Two: May 2017 to November 2017		Phase Two: 765
Franklin County, Ohio	Phase One: August 2015 to November 2015	Phase One: August 2015 to November 2015	850,077	Phase One: 30
	Phase Two: July 2016 to May 2017	Phase Two: July 2016 to May 2017		Phase Two: 1,500

Section 12 – Project Management and Program Support

File 12-4 Deploy 1

12.4 Provide a roll-out plan for deploying all components of the proposed SVS to the GASOS for up to 10 local jurisdictions for use in November 2019 elections by August 1, 2019. Reference Attachment O - Potential Equipment Distribution.

Dominion

Dominion has provided a lengthy narrative describing the proposed Implementation Plan. Please refer to the Plan located in response to File 12-1.

In essence, Dominion will secure a facility in Atlanta proper conveniently located to the new GASOS offices by July 1, 2019. The kick off meeting between the GASOS and Dominion will be scheduled as soon as the contract award is finalized.

Delivery of all system components as defined for the pilot counties in Attachment O. will be received at the Dominion facility in late July. Acceptance Testing of all devices and software will begin with the GASOS staff on-site working hand in hand with the Dominion technicians.

As Acceptance Testing is completed we will schedule delivery to the respective counties. At that time, we will have agreed to the training curriculum with GASOS to be provided to the counties and their poll workers. As the training classes are being scheduled at the county level, Dominion's coding staff will begin the process of building ballots for the pilot counties.

The ballot building process will be done in concert with the GASOS staff ultimately responsible for the county database coding post contract. Working closely with the Dominion coding staff will serve as an excellent exposure and knowledge transfer vehicle to enhance the EMS training to be provided to the GASOS staff after the November election per our Plan time line.

Absentee Ballots will ultimately be printed either in house on the Dominion Remote Ballot Printing system or the files will be sent to a ballot printer.

Dominion will perform the L&A process at each county and use that opportunity to expose the county staff to the requirements and procedures as to how to conduct L&A tasks in the future. Absentee and UOCAVA ballots will be mailed on time.

Poll worker training classes will be conducted, and Advanced Voting and Election Day support plans and staffing will be put in place.

The counties will have a County technician on-site and each County will have a set of Election Day rovers on so-site as well depending the number of polls to be active.

KNOWiNK

KNOWiNK’s project plan provided in 12-1 PM Time includes a roll-out plan to deploy all components of the ePollbook for use in November 2019 elections by August 1, 2019. Per Attachment O – Potential Equipment Distribution, the project plan reflects the number of ePollbooks and jurisdictions deploying for use in November 2019 elections. We recommend the GASOS use the detailed project plan provided for Statewide management of the electronic poll book roll-out by phases.

Section 12 – Project Management and Program Support

File 12-5 Deploy 2

12.5 Provide a roll-out plan for deploying of a representative sample of equipment for each county by December 2019. Reference Attachment O - Potential Equipment Distribution.

Dominion

Dominion’s Implementation Plan is available for review in its entirety in response to File 12-1. Insights into the efforts we will undertake to exceed the representative sample of voting system components as detailed in Attachment O are included in the plan.

In essence, Dominion plans to receive voting system products in our Atlanta facility beginning in August 2019 in quantities sufficient to allow Acceptance Testing to be performed on a monthly basis. As a result of this concept, Dominion will be able to delivery a full set of equipment to the counties starting immediately after the November election is completed by following a systematic delivery schedule. We have the option to deliver the sample quantities as defined in Attachment O or to exceed those quantities by delivering a full set of items to each county.

To accommodate the counties ability to receive the new system components at one time, we have included a decommissioning process to be conducted by a Georgia firm that specializes in decommissioning equipment within the state. This process will take care to follow all federal, state and local regulations regarding disposal and recycling as applicable, as well as ensuring the secure and complete destruction of any information related to privacy and security.

The final decision to deliver per the sample concept or delivery all at one time to each county will be negotiated with the GASOS in the project planning stages following contract award.

KNOWiNK

KNOWiNK's project plan provided in 12-1 PM Time includes a roll-out plan to deploy a representative sample of equipment to each county by December 2019. Per Attachment O – Potential Equipment Distribution, the project plan reflects the number of ePollbooks and jurisdictions deploying for Phase 2 – Part 1. We recommend the GASOS use the detailed project plan provided for Statewide management of the electronic poll book roll-out by phases.

Section 12 – Project Management and Program Support

File 12-6 Deploy 3

12.6 Provide a roll-out plan for deploying all equipment to all 159 counties through a phased roll-out in the first quarter of 2020. Reference Attachment O - Potential Equipment Distribution.

Dominion

Dominion's Implementation Plan which is available for review in response to File 12-1, which proposes delivery in advance of the first Quarter 2020 milestones as stated in Attachment O.

The Dominion plan is to deliver fully by the end of 2019 or no later than January 15, 2020 so the State, the counties, and the poll workers all have adequate time to install, train and establish the support model for the statewide election in March.

As the equipment and software is being delivered to the counties beginning immediately after the November election is complete, training for the GASOS staff, county staffs and poll workers, and assisting in the Voter Out Reach campaign will all be in motion.   To accomplish such a comprehensive plan and performance of complex tasks, time is of the essence to insure a successful roll out and March election.   The more time allotted for training, the greater the chance for success.

We look forward to discussing the Plan with the GASOS leadership.

KNOWiNK

KNOWiNK's project plan provided in 12-1 PM Time includes a roll-out plan to deploy all components of the ePollbook to all 159 counties through a phased roll-out in the first quarer or 2020. Per Attachment O – Potential Equipment Distribution, the project plan reflects the number of ePollbooks and jurisdictions for the phased roll-out to all 159 counties. We recommend the GASOS use the detailed project plan provided for Statewide management of the electronic poll book roll-out by phases.

Section 13 – Application Lifecycle Management and Release Management Plan

File 13-1 ALM

13.1 Detail all of the environments used for your development lifecycles (i.e. development, sandbox, user acceptance testing (UAT), and production).

Dominion

All products that comprise the Democracy Suite platform follow the best software development practices, which include additional source code quality and security procedures. All software programs satisfy recommended coding standards, as well as code styling guidelines as required by EAC VVSG standards. Automated code review processes are in place, that verifies compliance with industry accepted coding standards for programming languages used. For example, we use StyleCop, a static code analysis tool that helps us write consistently formatted code written in accordance with predefined rules. StyleCop analysis is performed on a daily basis (assessment is run against nightly builds) so the code is always up to date.

Below we detail the systems, databases and environments:

Operating Systems

- Microsoft Windows 10 Professional (EMS/ADJ/ICC)
- Microsoft Windows Server 2016 (EMS/ADJ)
- uClinux 2.4 (ICP)
- Android 8.1 (ICX)

Database

- Microsoft SQL Server 2016
- SQLite (integrated into Android 8.1)

Development Environments

- Microsoft Visual Studio 2017 (EMS/ADJ)
- Microsoft Visual Studio 2015 (ICC)
- Android Studio 3.4 (ICX)

In addition, proper system and software hardening procedures are clearly defined and regularly tested. Testing is performed on the lower source code level using code analysis tools, and on the system level using Nessus vulnerability testing tool. Data integrity and confidentiality is also implemented according to NIST defined and FIPS validate procedures and algorithms.

Dominion uses multi-level assurance and quality control processes to ensure that all elements of our integrated voting system perform properly with every use. Dominion uses a top tier contract manufacturer, based in the United States, and recognized as a leader in the industry for manufacturing. Internal acceptance testing is performed on each voting system on receipt from the manufacturer. By the time our products are purchased by the customer, they have gone through three full rounds of acceptance testing. Independent reviews of election databases are conducted to prior Logic and Accuracy testing. We recommend (and support our customers to conduct) precinct-level pre-election testing.

In addition to this rigorous testing and control program designed to catch errors, Dominion Voting regularly conducts process audits of our acceptance testing, and programming processes to ensure that errors never occur.

KNOWiNK

KNOWiNK uses the following environments for development lifecycles:

[redacted]

[redacted]

[redacted]

Section 13 – Application Lifecycle Management and Release Management Plan

File 13-2 ALM Test

13.2 Provide a description of testing protocols and outputs provided to GASOS used to formalize releases and make sure all testing has been completed prior to any release. Include sample use cases and sample test results.

Dominion
The EAC Certification process requires adherence to strict testing protocols and results. When applicable Dominion also conforms to testing requirements of individual states. As Georgia requires EAC Certification of an EMS, on the following pages Dominion has provided the VSTL testing report for Democracy Suite v5.5, which details the testing protocols and outputs applicable to the proposed solution for Georgia.

We would be happy to provide additional information upon request.

Certification Test Report - Modification

Report Number: DVS-018-MCTR-01

Democracy Suite 5.5-A

Certification Test Report – Modification Version 1.1

December 15th, 2018

Prepared for:

Vendor Name	*Dominion Voting Systems*
Vendor System	*Democracy Suite 5.5-A*
EAC Application No.	*DVS-DemSuite5.5-A*
Vendor Address	*1201 18th Street, Suite 210* *Denver, Colorado 80202*

Prepared by:

SLI Compliance℠
4720 Independence St.
Wheat Ridge, CO 80033
303-422-1566
www.SLICompliance.com

NVLAP® TESTING
NVLAP Lab Code 200733-0

Accredited by the National Institute of Standards and Technology (NIST) National Voluntary Lab Accreditation Program (NVLAP), and accredited by the Election Assistance Commission (EAC) for VSTL status.

Revision History

Date	Release	Author	Revision Summary
December 14th, 2018	1.0	J. Panek	Initial Draft
December 15th, 2018	1.1	J. Panek	Updated to address EAC Comments

Disclaimer

The Certification Test results reported herein must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government. Results herein relate only to the items tested.

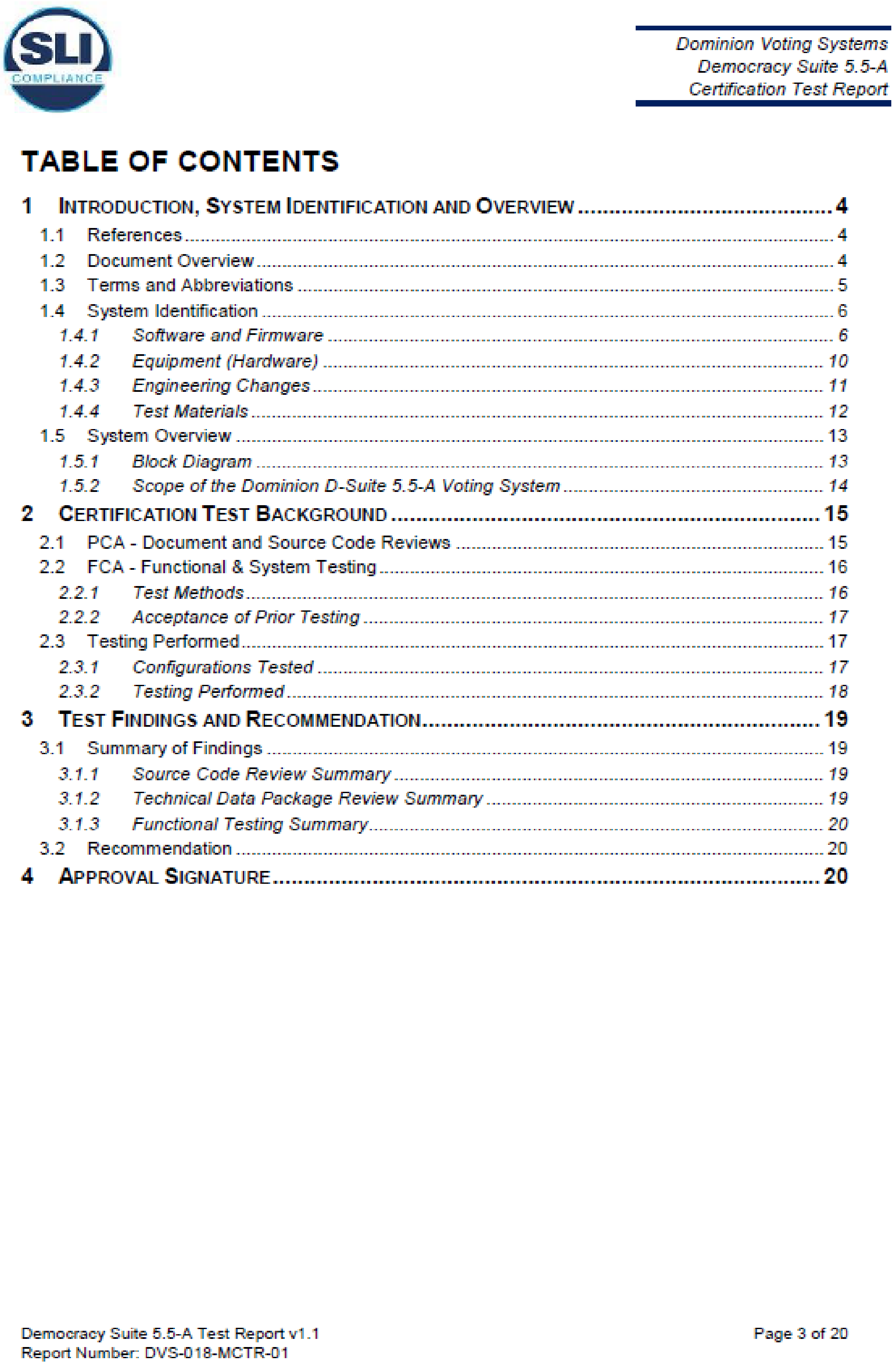
Trademarks

- SLI is a registered trademark of SLI Compliance, a Division of Gaming Laboratories International, LLC
- All products and company names are used for identification purposes only and may be trademarks of their respective owners.

The tests referenced in this document were performed in a controlled environment using specific systems and data sets, and results are related to the specific items tested. Actual results in other environments may vary.

Opinions and Interpretations

Any opinions or interpretations included in this report shall be marked as such, starting with "It is SLI's opinion/interpretation…"



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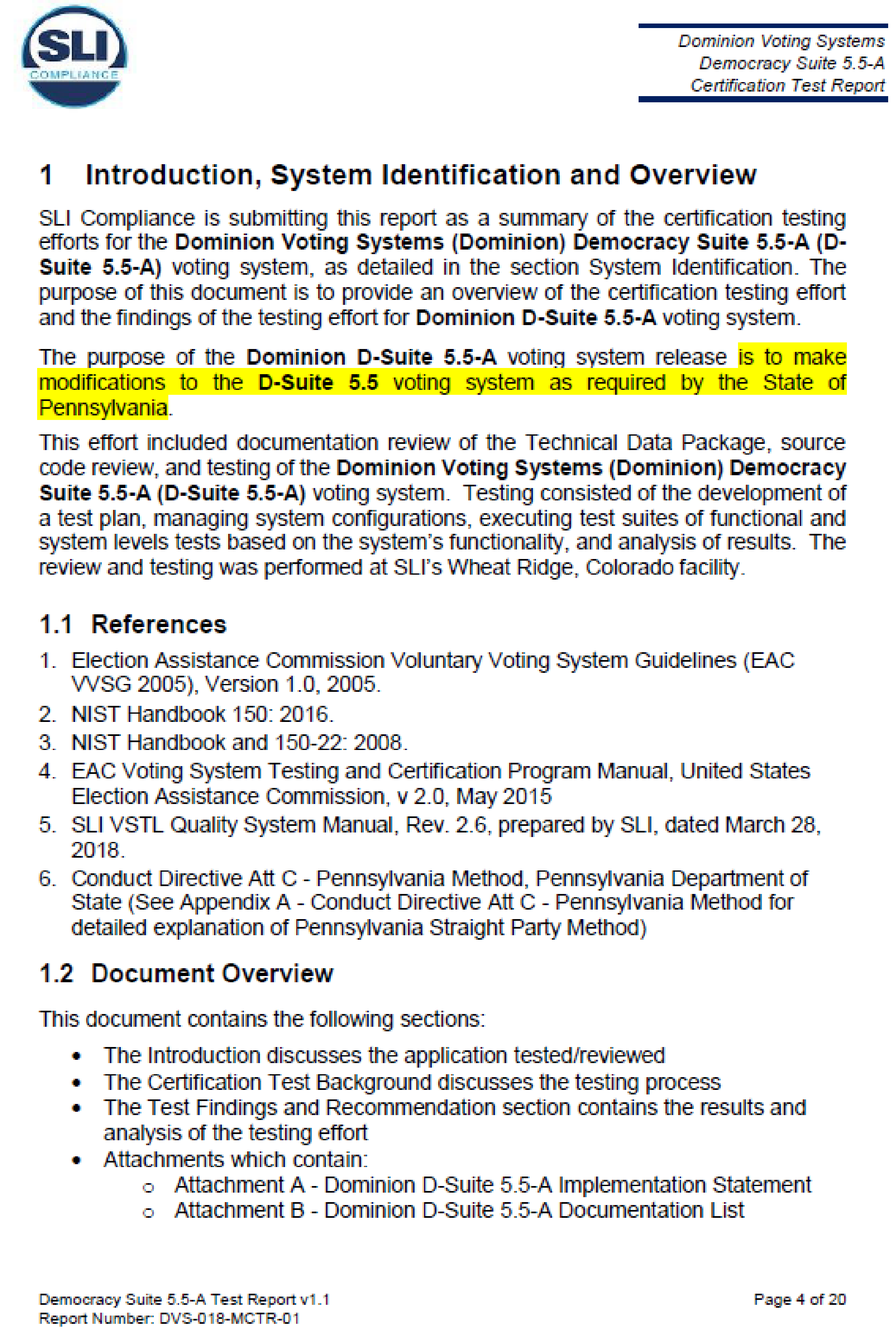


1 Introduction, System Identification and Overview

SLI Compliance is submitting this report as a summary of the certification testing efforts for the **Dominion Voting Systems (Dominion) Democracy Suite 5.5-A (D-Suite 5.5-A)** voting system, as detailed in the section System Identification. The purpose of this document is to provide an overview of the certification testing effort and the findings of the testing effort for **Dominion D-Suite 5.5-A** voting system.

The purpose of the **Dominion D-Suite 5.5-A** voting system release is to make modifications to the **D-Suite 5.5** voting system as required by the State of Pennsylvania.

This effort included documentation review of the Technical Data Package, source code review, and testing of the **Dominion Voting Systems (Dominion) Democracy Suite 5.5-A (D-Suite 5.5-A)** voting system. Testing consisted of the development of a test plan, managing system configurations, executing test suites of functional and system levels tests based on the system's functionality, and analysis of results. The review and testing was performed at SLI's Wheat Ridge, Colorado facility.

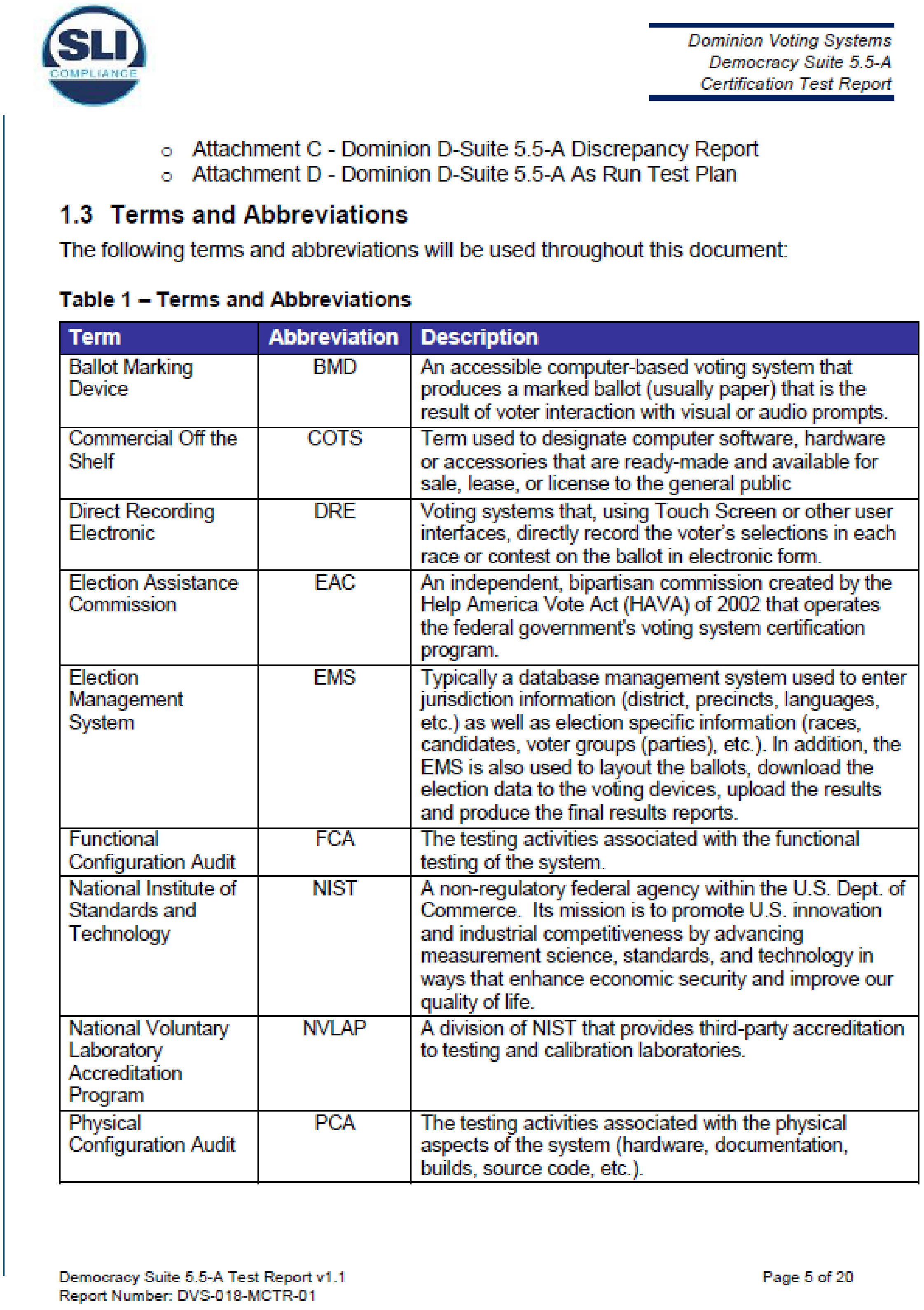
1.1 References

1. Election Assistance Commission Voluntary Voting System Guidelines (EAC VVSG 2005), Version 1.0, 2005.
2. NIST Handbook 150: 2016.
3. NIST Handbook and 150-22: 2008.
4. EAC Voting System Testing and Certification Program Manual, United States Election Assistance Commission, v 2.0, May 2015
5. SLI VSTL Quality System Manual, Rev. 2.6, prepared by SLI, dated March 28, 2018.
6. Conduct Directive Att C - Pennsylvania Method, Pennsylvania Department of State (See Appendix A - Conduct Directive Att C - Pennsylvania Method for detailed explanation of Pennsylvania Straight Party Method)

1.2 Document Overview

This document contains the following sections:

- The Introduction discusses the application tested/reviewed
- The Certification Test Background discusses the testing process
- The Test Findings and Recommendation section contains the results and analysis of the testing effort
- Attachments which contain:
    - Attachment A - Dominion D-Suite 5.5-A Implementation Statement
    - Attachment B - Dominion D-Suite 5.5-A Documentation List



- Attachment C - Dominion D-Suite 5.5-A Discrepancy Report
- Attachment D - Dominion D-Suite 5.5-A As Run Test Plan

1.3 Terms and Abbreviations

The following terms and abbreviations will be used throughout this document:

Table 1 – Terms and Abbreviations

Term	Abbreviation	Description
Ballot Marking Device	BMD	An accessible computer-based voting system that produces a marked ballot (usually paper) that is the result of voter interaction with visual or audio prompts.
Commercial Off the Shelf	COTS	Term used to designate computer software, hardware or accessories that are ready-made and available for sale, lease, or license to the general public
Direct Recording Electronic	DRE	Voting systems that, using Touch Screen or other user interfaces, directly record the voter's selections in each race or contest on the ballot in electronic form.
Election Assistance Commission	EAC	An independent, bipartisan commission created by the Help America Vote Act (HAVA) of 2002 that operates the federal government's voting system certification program.
Election Management System	EMS	Typically a database management system used to enter jurisdiction information (district, precincts, languages, etc.) as well as election specific information (races, candidates, voter groups (parties), etc.). In addition, the EMS is also used to layout the ballots, download the election data to the voting devices, upload the results and produce the final results reports.
Functional Configuration Audit	FCA	The testing activities associated with the functional testing of the system.
National Institute of Standards and Technology	NIST	A non-regulatory federal agency within the U.S. Dept. of Commerce. Its mission is to promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve our quality of life.
National Voluntary Laboratory Accreditation Program	NVLAP	A division of NIST that provides third-party accreditation to testing and calibration laboratories.
Physical Configuration Audit	PCA	The testing activities associated with the physical aspects of the system (hardware, documentation, builds, source code, etc.).

Term	Abbreviation	Description
Request For Information	RFI	A means used by testing laboratories and manufacturers to request that the EAC provide an interpretation of a technical issue related to testing of voting systems.
Technical Data Package	TDP	The data package supplied by the vendor, which includes Functional Requirements, Specifications, End-user documentation, Procedures, System Overview, Configuration Management Plan, Quality Assurance Program, and manuals for each of the required hardware, software, firmware components of a voting system.
Voluntary Voting System Guidelines	VVSG	A set of specifications and requirements against which voting systems can be tested to determine if the systems provide all of the basic functionality, accessibility and security capabilities required for EAC certification.
Voting System Test Lab	VSTL	An independent testing organization accredited by NVLAP and the EAC to conduct voting system testing for EAC certification.

1.4 System Identification

The **Dominion D-Suite 5.5-A** was submitted for certification testing with the hardware and software listed below. No other **Dominion** product was included in this test effort.

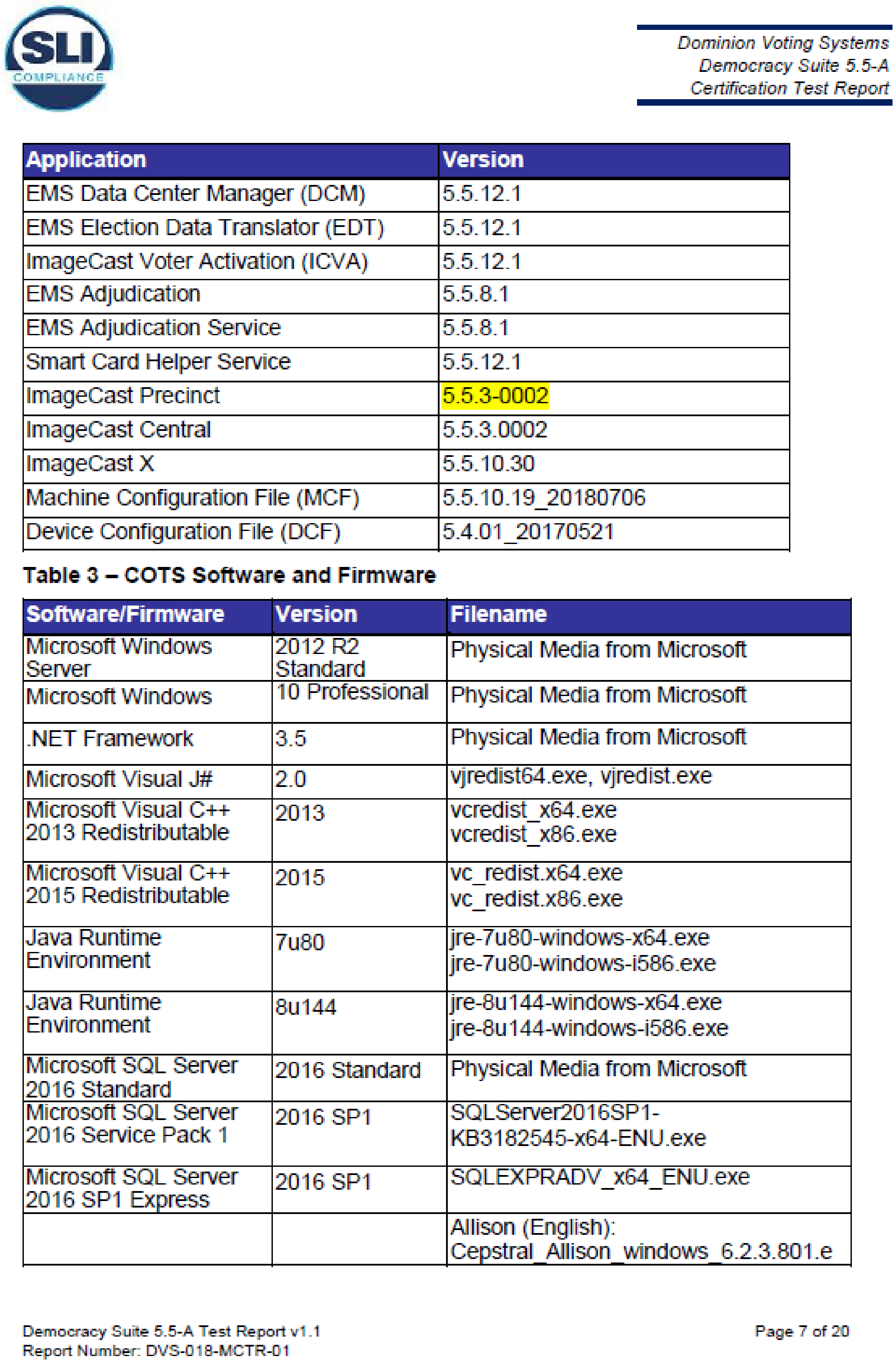
1.4.1 Software and Firmware

The software and firmware employed by **Dominion D-Suite 5.5-A** consists of 2 types, custom and commercial off the shelf (COTS). COTS applications were verified to be pristine or were subjected to source code review for analysis of any modifications and verification of meeting the pertinent standards.

The tables below detail each application employed by the **Dominion D-Suite 5.5-A** voting system.

Table 2 – Dominion D-Suite 5.5-A Software/Firmware

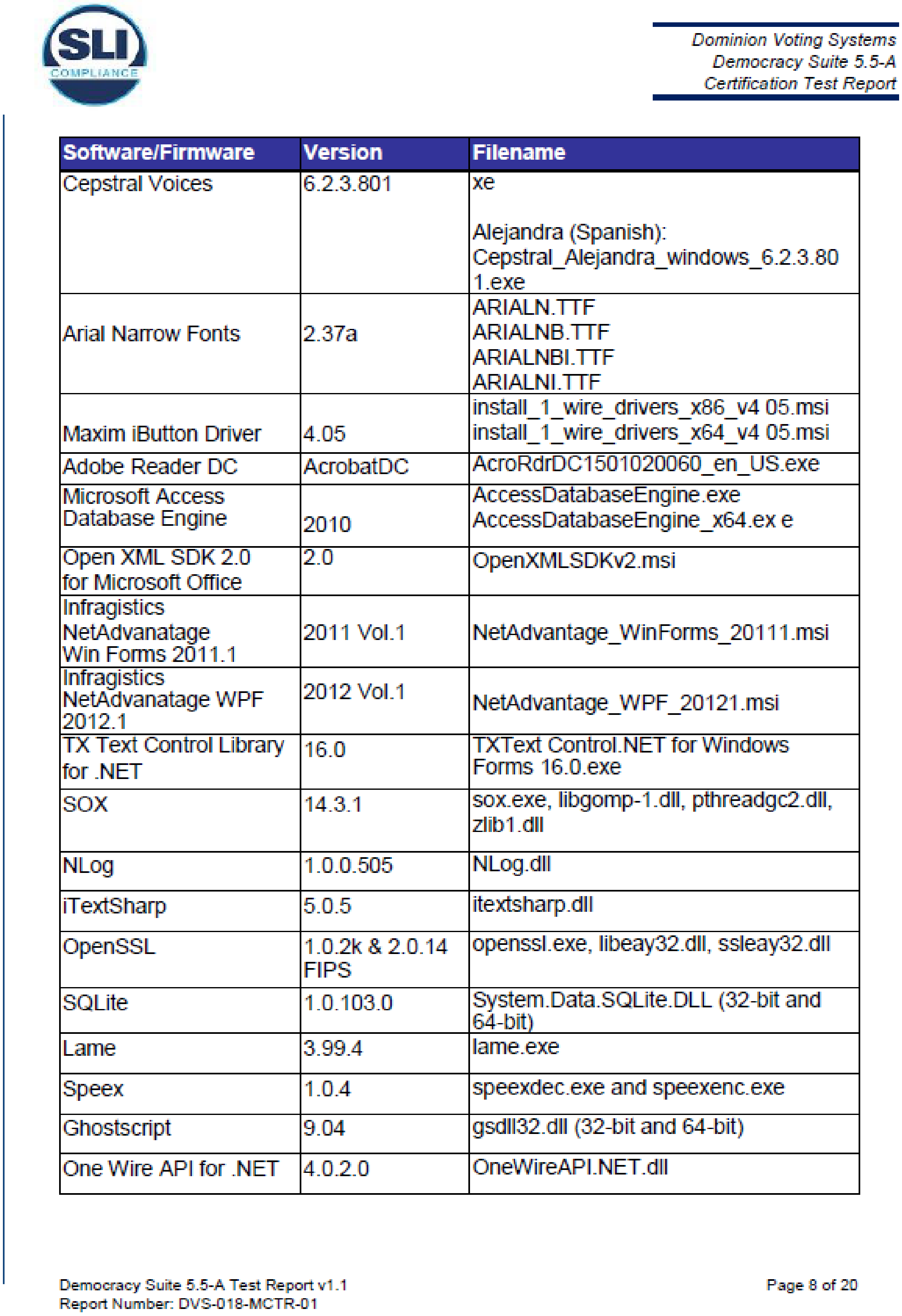
Application	Version
EMS Election Event Designer (EED)	5.5.12.1
EMS Results Tally and Reporting (RTR)	5.5.12.1
EMS Application Server	5.5.12.1
EMS File System Service (FSS)	5.5.12.1
EMS Audio Studio (AS)	5.5.12.1



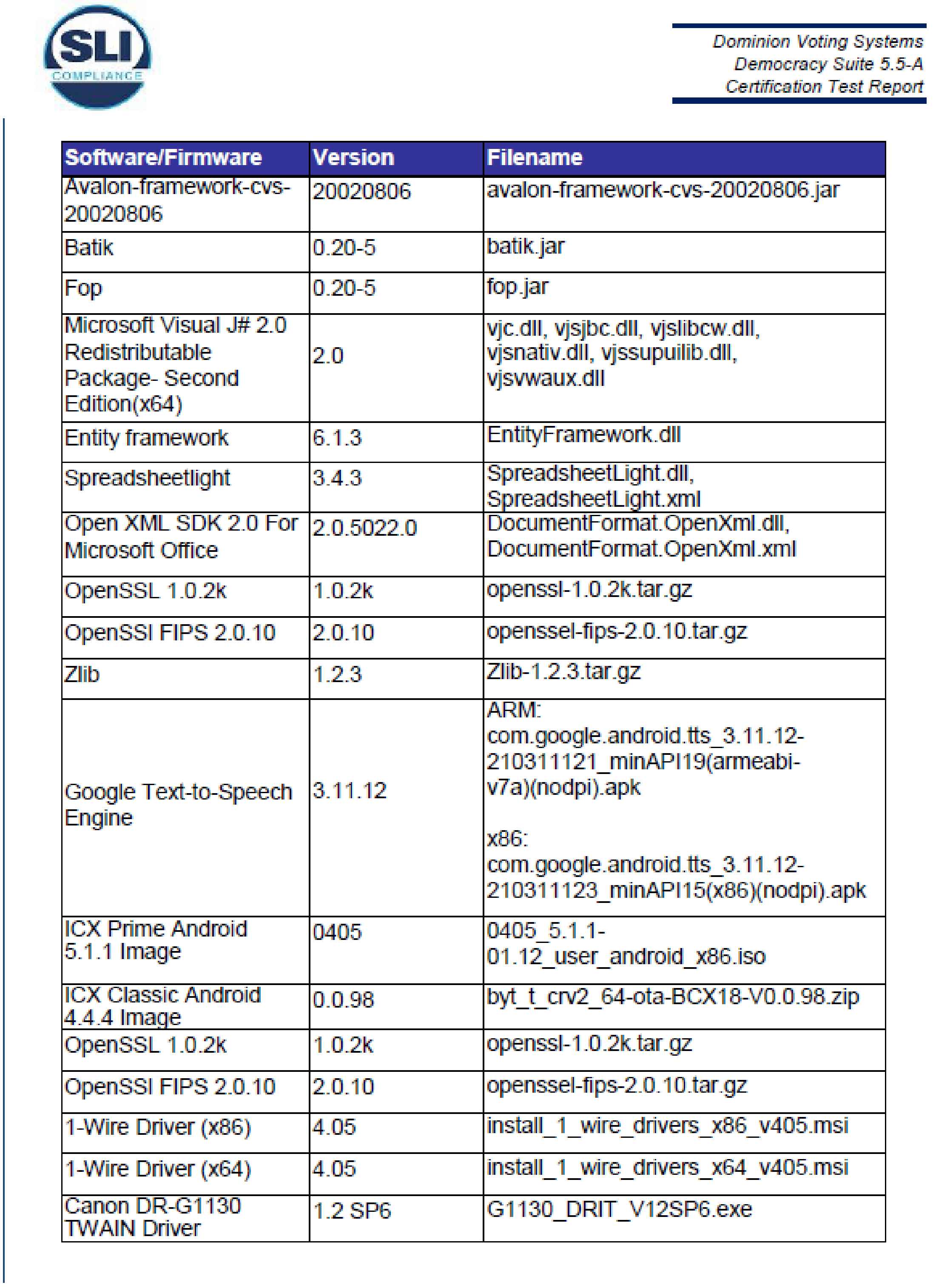
Application	Version
EMS Data Center Manager (DCM)	5.5.12.1
EMS Election Data Translator (EDT)	5.5.12.1
ImageCast Voter Activation (ICVA)	5.5.12.1
EMS Adjudication	5.5.8.1
EMS Adjudication Service	5.5.8.1
Smart Card Helper Service	5.5.12.1
ImageCast Precinct	5.5.3-0002
ImageCast Central	5.5.3.0002
ImageCast X	5.5.10.30
Machine Configuration File (MCF)	5.5.10.19_20180706
Device Configuration File (DCF)	5.4.01_20170521

Table 3 – COTS Software and Firmware

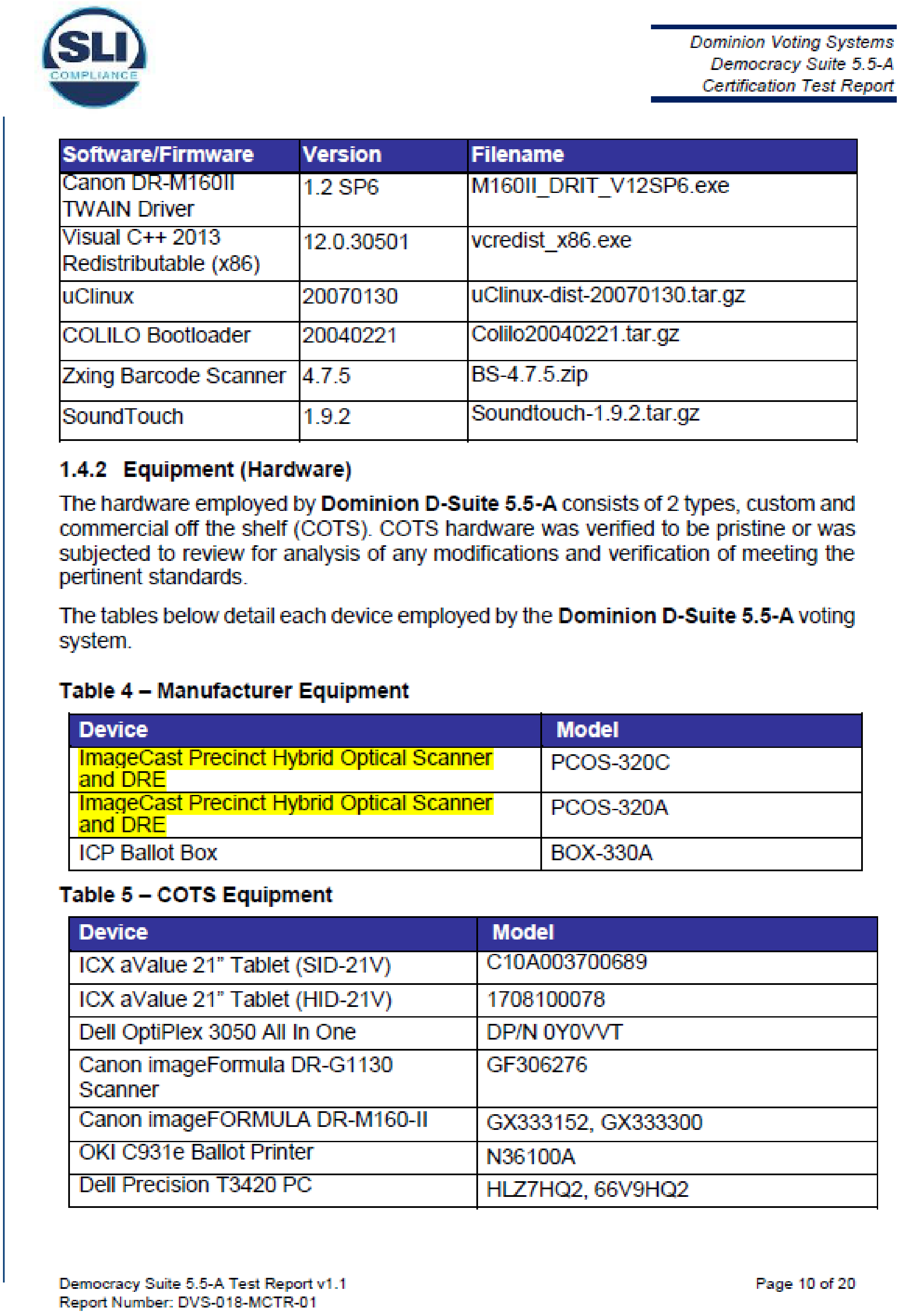
Software/Firmware	Version	Filename
Microsoft Windows Server	2012 R2 Standard	Physical Media from Microsoft
Microsoft Windows	10 Professional	Physical Media from Microsoft
.NET Framework	3.5	Physical Media from Microsoft
Microsoft Visual J#	2.0	vjredist64.exe, vjredist.exe
Microsoft Visual C++ 2013 Redistributable	2013	vcredist_x64.exe vcredist_x86.exe
Microsoft Visual C++ 2015 Redistributable	2015	vc_redist.x64.exe vc_redist.x86.exe
Java Runtime Environment	7u80	jre-7u80-windows-x64.exe jre-7u80-windows-i586.exe
Java Runtime Environment	8u144	jre-8u144-windows-x64.exe jre-8u144-windows-i586.exe
Microsoft SQL Server 2016 Standard	2016 Standard	Physical Media from Microsoft
Microsoft SQL Server 2016 Service Pack 1	2016 SP1	SQLServer2016SP1-KB3182545-x64-ENU.exe
Microsoft SQL Server 2016 SP1 Express	2016 SP1	SQLEXPRADV_x64_ENU.exe
		Allison (English): Cepstral_Allison_windows_6.2.3.801.e



Software/Firmware	Version	Filename
Cepstral Voices	6.2.3.801	xe Alejandra (Spanish): Cepstral_Alejandra_windows_6.2.3.801.exe
Arial Narrow Fonts	2.37a	ARIALN.TTF ARIALNB.TTF ARIALNBI.TTF ARIALNI.TTF
Maxim iButton Driver	4.05	install_1_wire_drivers_x86_v4 05.msi install_1_wire_drivers_x64_v4 05.msi
Adobe Reader DC	AcrobatDC	AcroRdrDC1501020060_en_US.exe
Microsoft Access Database Engine	2010	AccessDatabaseEngine.exe AccessDatabaseEngine_x64.ex e
Open XML SDK 2.0 for Microsoft Office	2.0	OpenXMLSDKv2.msi
Infragistics NetAdvanatage Win Forms 2011.1	2011 Vol.1	NetAdvantage_WinForms_20111.msi
Infragistics NetAdvanatage WPF 2012.1	2012 Vol.1	NetAdvantage_WPF_20121.msi
TX Text Control Library for .NET	16.0	TXText Control.NET for Windows Forms 16.0.exe
SOX	14.3.1	sox.exe, libgomp-1.dll, pthreadgc2.dll, zlib1.dll
NLog	1.0.0.505	NLog.dll
iTextSharp	5.0.5	itextsharp.dll
OpenSSL	1.0.2k & 2.0.14 FIPS	openssl.exe, libeay32.dll, ssleay32.dll
SQLite	1.0.103.0	System.Data.SQLite.DLL (32-bit and 64-bit)
Lame	3.99.4	lame.exe
Speex	1.0.4	speexdec.exe and speexenc.exe
Ghostscript	9.04	gsdll32.dll (32-bit and 64-bit)
One Wire API for .NET	4.0.2.0	OneWireAPI.NET.dll



Software/Firmware	Version	Filename
Avalon-framework-cvs-20020806	20020806	avalon-framework-cvs-20020806.jar
Batik	0.20-5	batik.jar
Fop	0.20-5	fop.jar
Microsoft Visual J# 2.0 Redistributable Package- Second Edition(x64)	2.0	vjc.dll, vjsjbc.dll, vjslibcw.dll, vjsnativ.dll, vjssupuilib.dll, vjsvwaux.dll
Entity framework	6.1.3	EntityFramework.dll
Spreadsheetlight	3.4.3	SpreadsheetLight.dll, SpreadsheetLight.xml
Open XML SDK 2.0 For Microsoft Office	2.0.5022.0	DocumentFormat.OpenXml.dll, DocumentFormat.OpenXml.xml
OpenSSL 1.0.2k	1.0.2k	openssl-1.0.2k.tar.gz
OpenSSl FIPS 2.0.10	2.0.10	openssel-fips-2.0.10.tar.gz
Zlib	1.2.3	Zlib-1.2.3.tar.gz
Google Text-to-Speech Engine	3.11.12	ARM: com.google.android.tts_3.11.12-210311121_minAPI19(armeabi-v7a)(nodpi).apk x86: com.google.android.tts_3.11.12-210311123_minAPI15(x86)(nodpi).apk
ICX Prime Android 5.1.1 Image	0405	0405_5.1.1-01.12_user_android_x86.iso
ICX Classic Android 4.4.4 Image	0.0.98	byt_t_crv2_64-ota-BCX18-V0.0.98.zip
OpenSSL 1.0.2k	1.0.2k	openssl-1.0.2k.tar.gz
OpenSSl FIPS 2.0.10	2.0.10	openssel-fips-2.0.10.tar.gz
1-Wire Driver (x86)	4.05	install_1_wire_drivers_x86_v405.msi
1-Wire Driver (x64)	4.05	install_1_wire_drivers_x64_v405.msi
Canon DR-G1130 TWAIN Driver	1.2 SP6	G1130_DRIT_V12SP6.exe



Software/Firmware	Version	Filename
Canon DR-M160II TWAIN Driver	1.2 SP6	M160II_DRIT_V12SP6.exe
Visual C++ 2013 Redistributable (x86)	12.0.30501	vcredist_x86.exe
uClinux	20070130	uClinux-dist-20070130.tar.gz
COLILO Bootloader	20040221	Colilo20040221.tar.gz
Zxing Barcode Scanner	4.7.5	BS-4.7.5.zip
SoundTouch	1.9.2	Soundtouch-1.9.2.tar.gz

1.4.2 Equipment (Hardware)

The hardware employed by **Dominion D-Suite 5.5-A** consists of 2 types, custom and commercial off the shelf (COTS). COTS hardware was verified to be pristine or was subjected to review for analysis of any modifications and verification of meeting the pertinent standards.

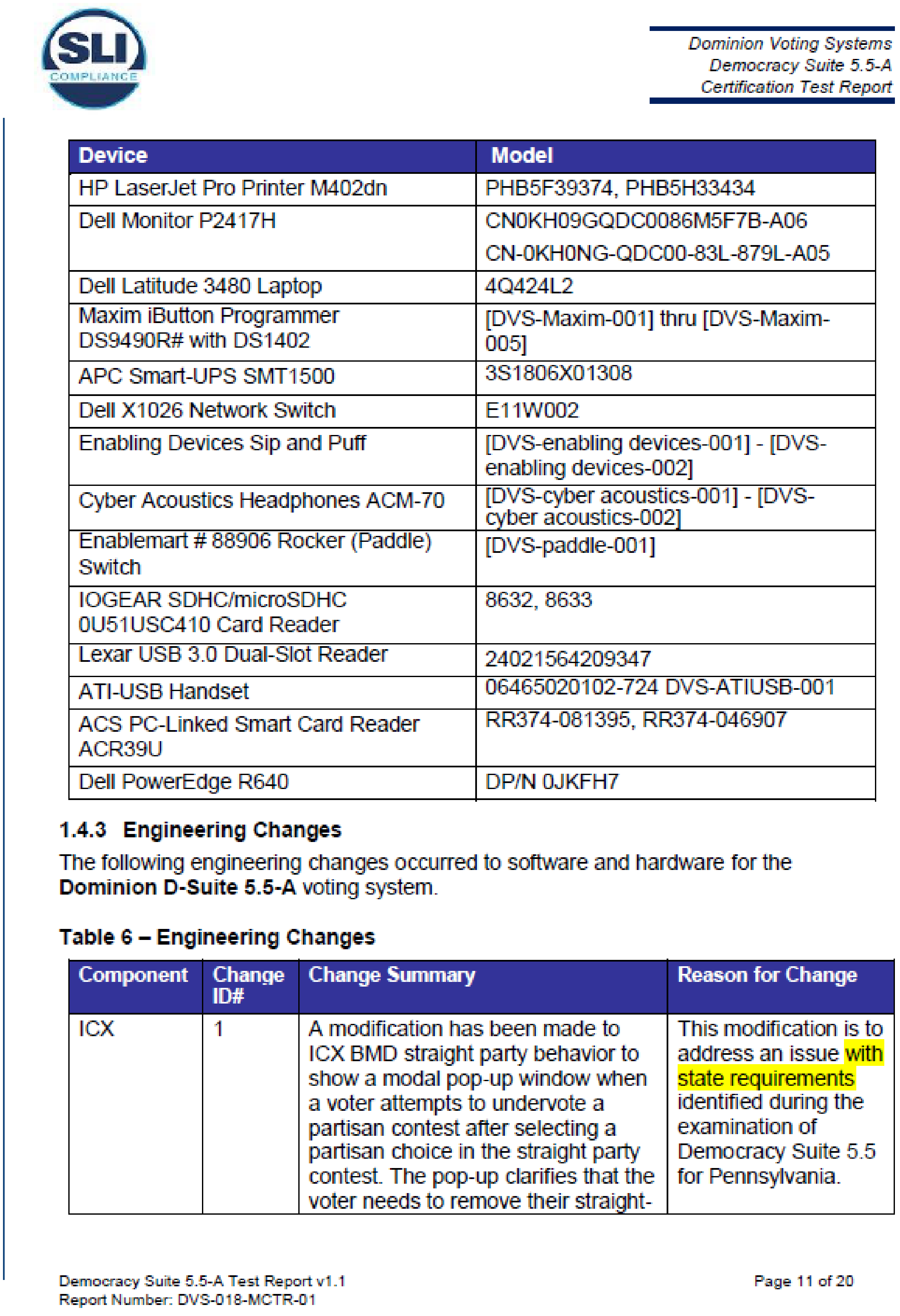
The tables below detail each device employed by the **Dominion D-Suite 5.5-A** voting system.

Table 4 – Manufacturer Equipment

Device	Model
ImageCast Precinct Hybrid Optical Scanner and DRE	PCOS-320C
ImageCast Precinct Hybrid Optical Scanner and DRE	PCOS-320A
ICP Ballot Box	BOX-330A

Table 5 – COTS Equipment

Device	Model
ICX aValue 21" Tablet (SID-21V)	C10A003700689
ICX aValue 21" Tablet (HID-21V)	1708100078
Dell OptiPlex 3050 All In One	DP/N 0Y0VVT
Canon imageFormula DR-G1130 Scanner	GF306276
Canon imageFORMULA DR-M160-II	GX333152, GX333300
OKI C931e Ballot Printer	N36100A
Dell Precision T3420 PC	HLZ7HQ2, 66V9HQ2



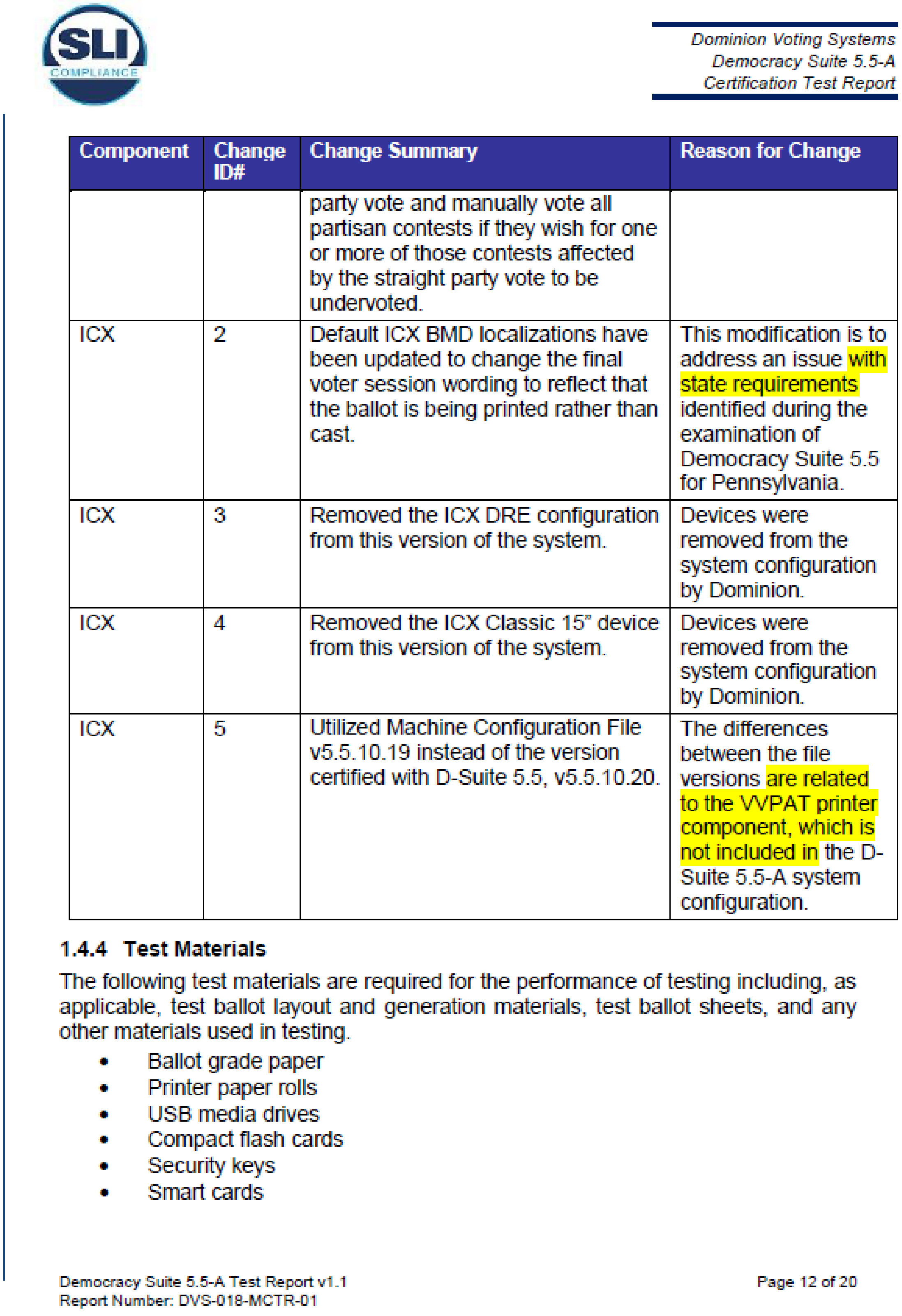
Device	Model
HP LaserJet Pro Printer M402dn	PHB5F39374, PHB5H33434
Dell Monitor P2417H	CN0KH09GQDC0086M5F7B-A06 CN-0KH0NG-QDC00-83L-879L-A05
Dell Latitude 3480 Laptop	4Q424L2
Maxim iButton Programmer DS9490R# with DS1402	[DVS-Maxim-001] thru [DVS-Maxim-005]
APC Smart-UPS SMT1500	3S1806X01308
Dell X1026 Network Switch	E11W002
Enabling Devices Sip and Puff	[DVS-enabling devices-001] - [DVS-enabling devices-002]
Cyber Acoustics Headphones ACM-70	[DVS-cyber acoustics-001] - [DVS-cyber acoustics-002]
Enablemart # 88906 Rocker (Paddle) Switch	[DVS-paddle-001]
IOGEAR SDHC/microSDHC 0U51USC410 Card Reader	8632, 8633
Lexar USB 3.0 Dual-Slot Reader	24021564209347
ATI-USB Handset	06465020102-724 DVS-ATIUSB-001
ACS PC-Linked Smart Card Reader ACR39U	RR374-081395, RR374-046907
Dell PowerEdge R640	DP/N 0JKFH7

1.4.3 Engineering Changes

The following engineering changes occurred to software and hardware for the **Dominion D-Suite 5.5-A** voting system.

Table 6 – Engineering Changes

Component	Change ID#	Change Summary	Reason for Change
ICX	1	A modification has been made to ICX BMD straight party behavior to show a modal pop-up window when a voter attempts to undervote a partisan contest after selecting a partisan choice in the straight party contest. The pop-up clarifies that the voter needs to remove their straight-	This modification is to address an issue with state requirements identified during the examination of Democracy Suite 5.5 for Pennsylvania.



Component	Change ID#	Change Summary	Reason for Change
		party vote and manually vote all partisan contests if they wish for one or more of those contests affected by the straight party vote to be undervoted.	
ICX	2	Default ICX BMD localizations have been updated to change the final voter session wording to reflect that the ballot is being printed rather than cast.	This modification is to address an issue with state requirements identified during the examination of Democracy Suite 5.5 for Pennsylvania.
ICX	3	Removed the ICX DRE configuration from this version of the system.	Devices were removed from the system configuration by Dominion.
ICX	4	Removed the ICX Classic 15" device from this version of the system.	Devices were removed from the system configuration by Dominion.
ICX	5	Utilized Machine Configuration File v5.5.10.19 instead of the version certified with D-Suite 5.5, v5.5.10.20.	The differences between the file versions are related to the VVPAT printer component, which is not included in the D-Suite 5.5-A system configuration.

1.4.4 Test Materials

The following test materials are required for the performance of testing including, as applicable, test ballot layout and generation materials, test ballot sheets, and any other materials used in testing.

- Ballot grade paper
- Printer paper rolls
- USB media drives
- Compact flash cards
- Security keys
- Smart cards

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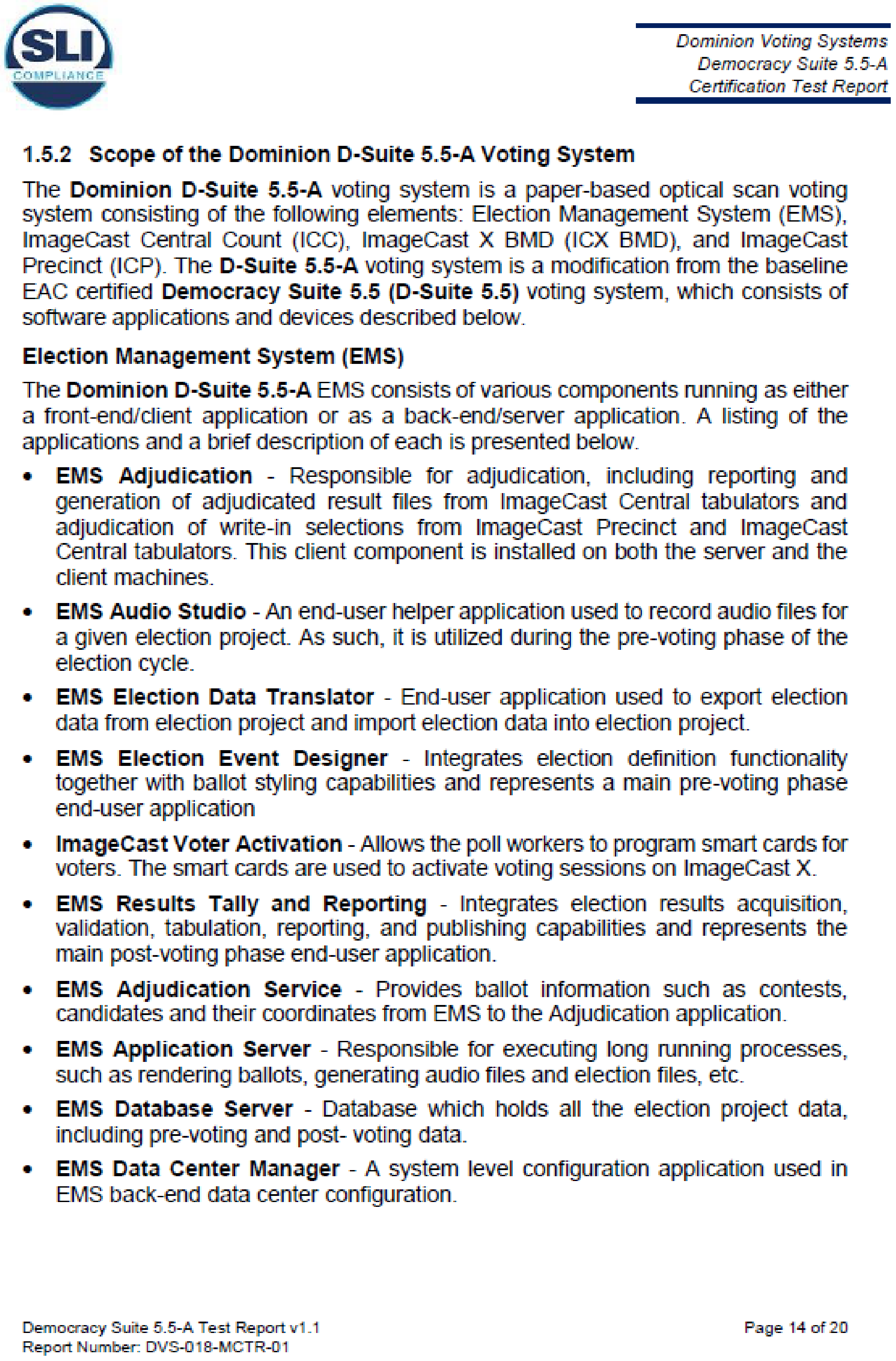


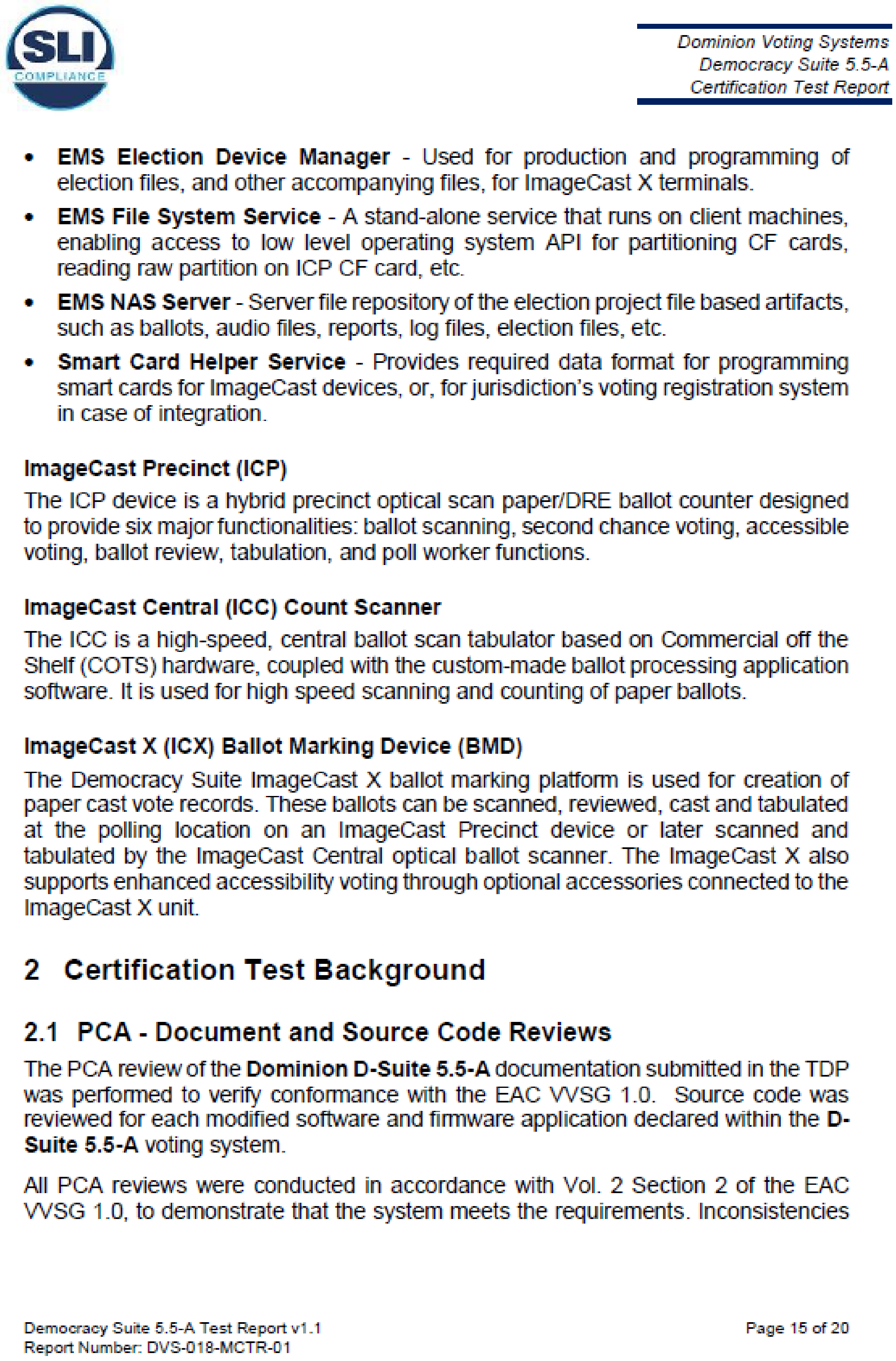
1.5.2 Scope of the Dominion D-Suite 5.5-A Voting System

The **Dominion D-Suite 5.5-A** voting system is a paper-based optical scan voting system consisting of the following elements: Election Management System (EMS), ImageCast Central Count (ICC), ImageCast X BMD (ICX BMD), and ImageCast Precinct (ICP). The **D-Suite 5.5-A** voting system is a modification from the baseline EAC certified **Democracy Suite 5.5 (D-Suite 5.5)** voting system, which consists of software applications and devices described below.

Election Management System (EMS)

The **Dominion D-Suite 5.5-A** EMS consists of various components running as either a front-end/client application or as a back-end/server application. A listing of the applications and a brief description of each is presented below.

- **EMS Adjudication** - Responsible for adjudication, including reporting and generation of adjudicated result files from ImageCast Central tabulators and adjudication of write-in selections from ImageCast Precinct and ImageCast Central tabulators. This client component is installed on both the server and the client machines.
- **EMS Audio Studio** - An end-user helper application used to record audio files for a given election project. As such, it is utilized during the pre-voting phase of the election cycle.
- **EMS Election Data Translator** - End-user application used to export election data from election project and import election data into election project.
- **EMS Election Event Designer** - Integrates election definition functionality together with ballot styling capabilities and represents a main pre-voting phase end-user application
- **ImageCast Voter Activation** - Allows the poll workers to program smart cards for voters. The smart cards are used to activate voting sessions on ImageCast X.
- **EMS Results Tally and Reporting** - Integrates election results acquisition, validation, tabulation, reporting, and publishing capabilities and represents the main post-voting phase end-user application.
- **EMS Adjudication Service** - Provides ballot information such as contests, candidates and their coordinates from EMS to the Adjudication application.
- **EMS Application Server** - Responsible for executing long running processes, such as rendering ballots, generating audio files and election files, etc.
- **EMS Database Server** - Database which holds all the election project data, including pre-voting and post- voting data.
- **EMS Data Center Manager** - A system level configuration application used in EMS back-end data center configuration.



- **EMS Election Device Manager** - Used for production and programming of election files, and other accompanying files, for ImageCast X terminals.
- **EMS File System Service** - A stand-alone service that runs on client machines, enabling access to low level operating system API for partitioning CF cards, reading raw partition on ICP CF card, etc.
- **EMS NAS Server** - Server file repository of the election project file based artifacts, such as ballots, audio files, reports, log files, election files, etc.
- **Smart Card Helper Service** - Provides required data format for programming smart cards for ImageCast devices, or, for jurisdiction's voting registration system in case of integration.

ImageCast Precinct (ICP)

The ICP device is a hybrid precinct optical scan paper/DRE ballot counter designed to provide six major functionalities: ballot scanning, second chance voting, accessible voting, ballot review, tabulation, and poll worker functions.

ImageCast Central (ICC) Count Scanner

The ICC is a high-speed, central ballot scan tabulator based on Commercial off the Shelf (COTS) hardware, coupled with the custom-made ballot processing application software. It is used for high speed scanning and counting of paper ballots.

ImageCast X (ICX) Ballot Marking Device (BMD)

The Democracy Suite ImageCast X ballot marking platform is used for creation of paper cast vote records. These ballots can be scanned, reviewed, cast and tabulated at the polling location on an ImageCast Precinct device or later scanned and tabulated by the ImageCast Central optical ballot scanner. The ImageCast X also supports enhanced accessibility voting through optional accessories connected to the ImageCast X unit.

2 Certification Test Background

2.1 PCA - Document and Source Code Reviews

The PCA review of the **Dominion D-Suite 5.5-A** documentation submitted in the TDP was performed to verify conformance with the EAC VVSG 1.0. Source code was reviewed for each modified software and firmware application declared within the **D-Suite 5.5-A** voting system.

All PCA reviews were conducted in accordance with Vol. 2 Section 2 of the EAC VVSG 1.0, to demonstrate that the system meets the requirements. Inconsistencies or errors in documentation were identified to **Dominion** in a Discrepancy Report for resolution or comment. This Discrepancy Report can be found in Attachment C.

All PCA source code reviews were conducted in accordance with Vol. 1 Section 5.2 and Vol. 2 Section 5 of the EAC VVSG 1.0, to demonstrate that the system meets the requirements. A total of 376 lines of code were modified in this release. The delivered code base was compared to the previous code base from **Dominion D-Suite 5.5**, with only modified modules being reviewed.

No inconsistencies or errors were found in the modified source code.

2.2 FCA - Functional & System Testing

The FCA review of the test documentation submitted by **Dominion** in the TDP was conducted according to the EAC VVSG 1.0 Vol. 2 Section 6.7.

SLI's standard Test Suites were customized for the **Dominion D-Suite 5.5-A** voting system and conducted in accordance with the EAC VVSG 1.0 Vol. 2 Section 6 in conjunction with the functional testing. Simulations of elections were conducted to demonstrate a beginning-to-end business use case process for the **Dominion D-Suite 5.5-A** voting system.

2.2.1 Test Methods

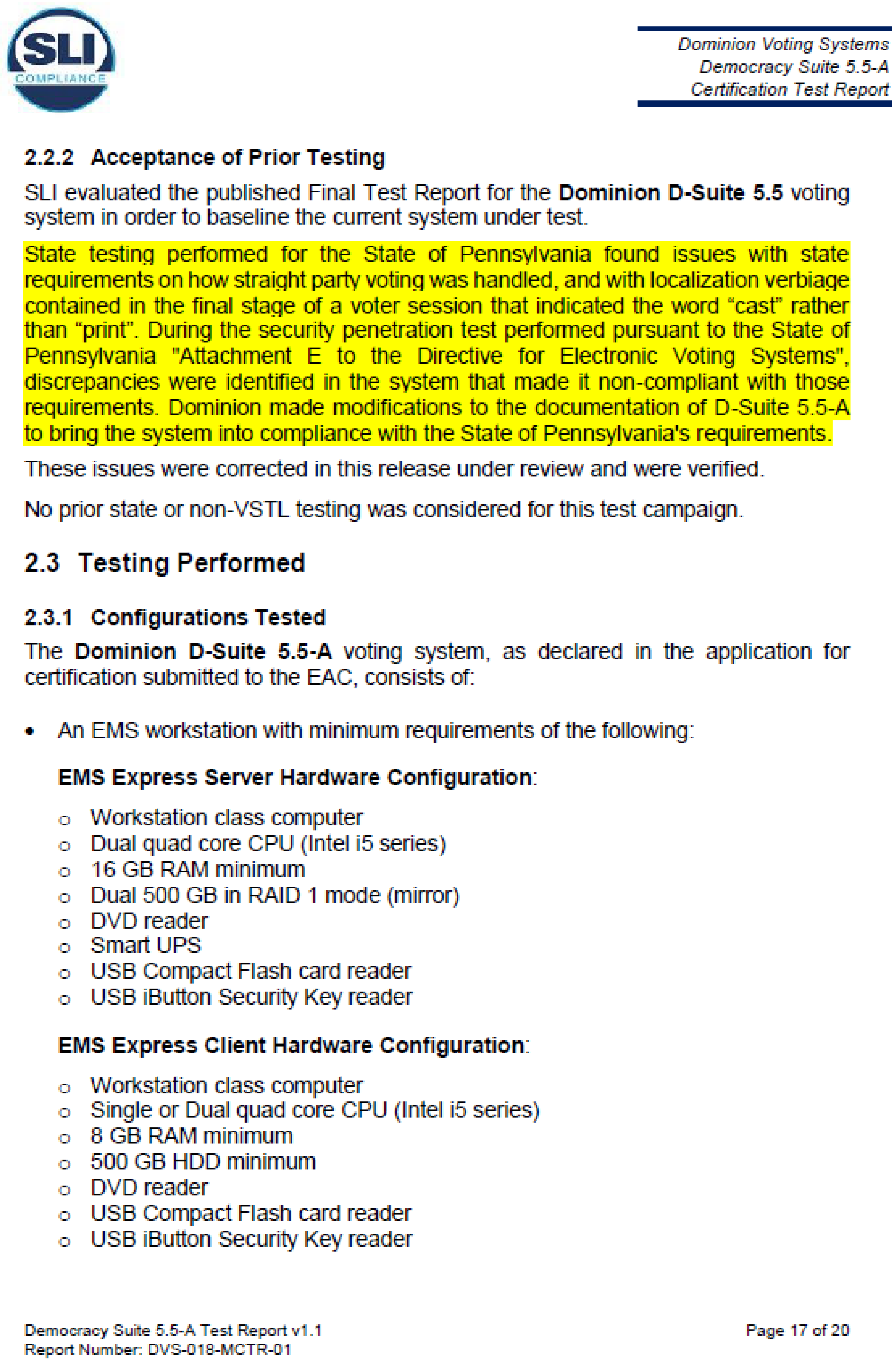
All test methods employed are within the scope of SLI's VSTL accreditation.

The following validated test methods were employed during this test campaign:

Table 7 – Test Methods

SLI VSTL Test Method Name
TM_Basic_Election_Components v1.1
TM_Ballot Formatting and Production v1.1
TM_Maintainability v1.1
TM_Security_Access_Control v1.1
TM_Tally_and_Reporting v1.1
TM_Voting_Capabilities v1.3
TM_Voting_Straight_Party

The above listed test methods are implemented in a complementary fashion: modules are employed from various methods to form suites. Suites include a logical sequence of functionality that is used to validate the requirement addressed by each module within the suite.



2.2.2 Acceptance of Prior Testing

SLI evaluated the published Final Test Report for the **Dominion D-Suite 5.5** voting system in order to baseline the current system under test.

State testing performed for the State of Pennsylvania found issues with state requirements on how straight party voting was handled, and with localization verbiage contained in the final stage of a voter session that indicated the word “cast” rather than “print”. During the security penetration test performed pursuant to the State of Pennsylvania "Attachment E to the Directive for Electronic Voting Systems", discrepancies were identified in the system that made it non-compliant with those requirements. Domínion made modifications to the documentation of D-Suite 5.5-A to bring the system into compliance with the State of Pennsylvania's requirements.

These issues were corrected in this release under review and were verified.

No prior state or non-VSTL testing was considered for this test campaign.

2.3 Testing Performed

2.3.1 Configurations Tested

The **Dominion D-Suite 5.5-A** voting system, as declared in the application for certification submitted to the EAC, consists of:

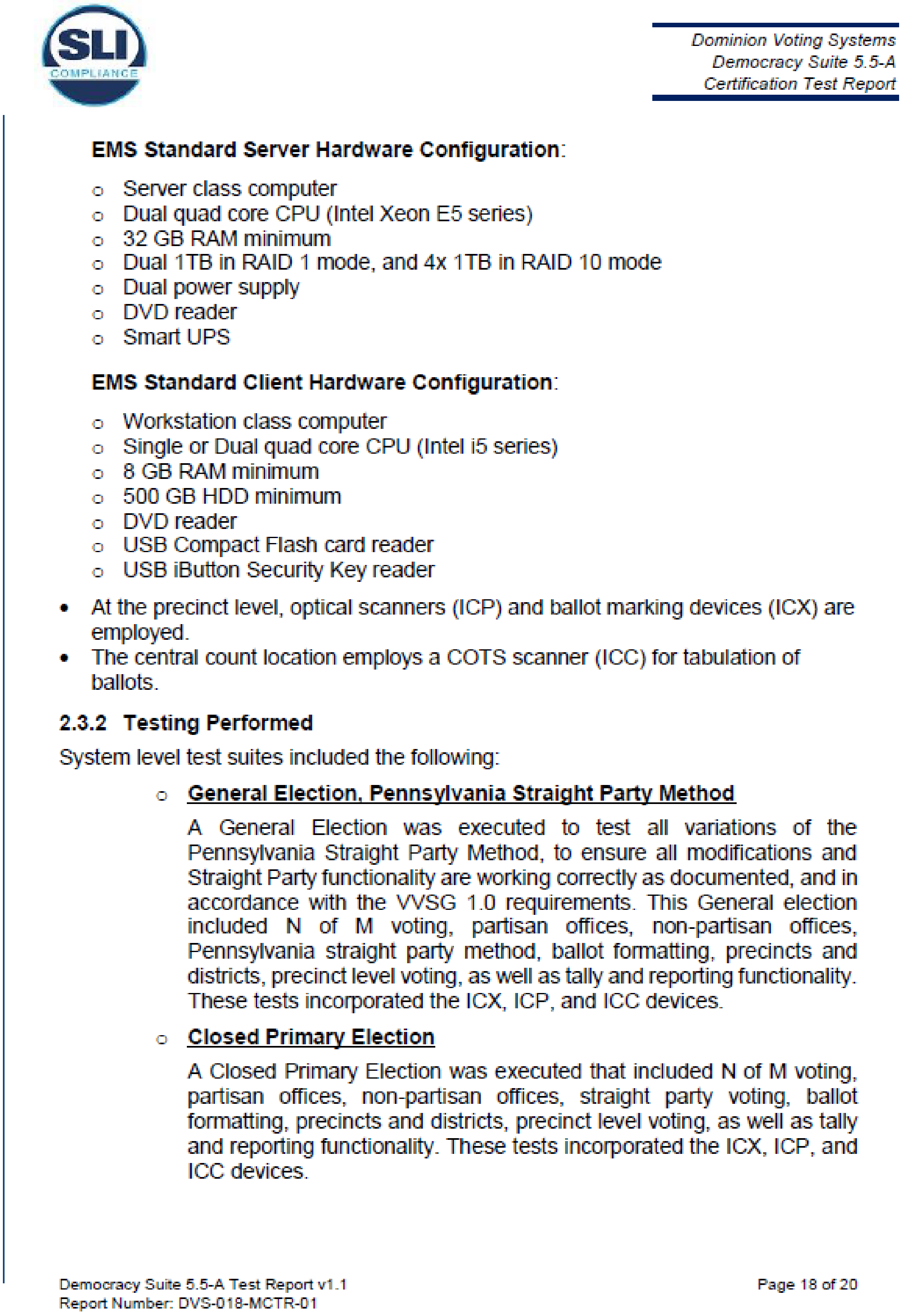
- An EMS workstation with minimum requirements of the following:

  EMS Express Server Hardware Configuration:

  - Workstation class computer
  - Dual quad core CPU (Intel i5 series)
  - 16 GB RAM minimum
  - Dual 500 GB in RAID 1 mode (mirror)
  - DVD reader
  - Smart UPS
  - USB Compact Flash card reader
  - USB iButton Security Key reader

  EMS Express Client Hardware Configuration:

  - Workstation class computer
  - Single or Dual quad core CPU (Intel i5 series)
  - 8 GB RAM minimum
  - 500 GB HDD minimum
  - DVD reader
  - USB Compact Flash card reader
  - USB iButton Security Key reader



EMS Standard Server Hardware Configuration:

- Server class computer
- Dual quad core CPU (Intel Xeon E5 series)
- 32 GB RAM minimum
- Dual 1TB in RAID 1 mode, and 4x 1TB in RAID 10 mode
- Dual power supply
- DVD reader
- Smart UPS

EMS Standard Client Hardware Configuration:

- Workstation class computer
- Single or Dual quad core CPU (Intel i5 series)
- 8 GB RAM minimum
- 500 GB HDD minimum
- DVD reader
- USB Compact Flash card reader
- USB iButton Security Key reader

- At the precinct level, optical scanners (ICP) and ballot marking devices (ICX) are employed.
- The central count location employs a COTS scanner (ICC) for tabulation of ballots.

2.3.2 Testing Performed

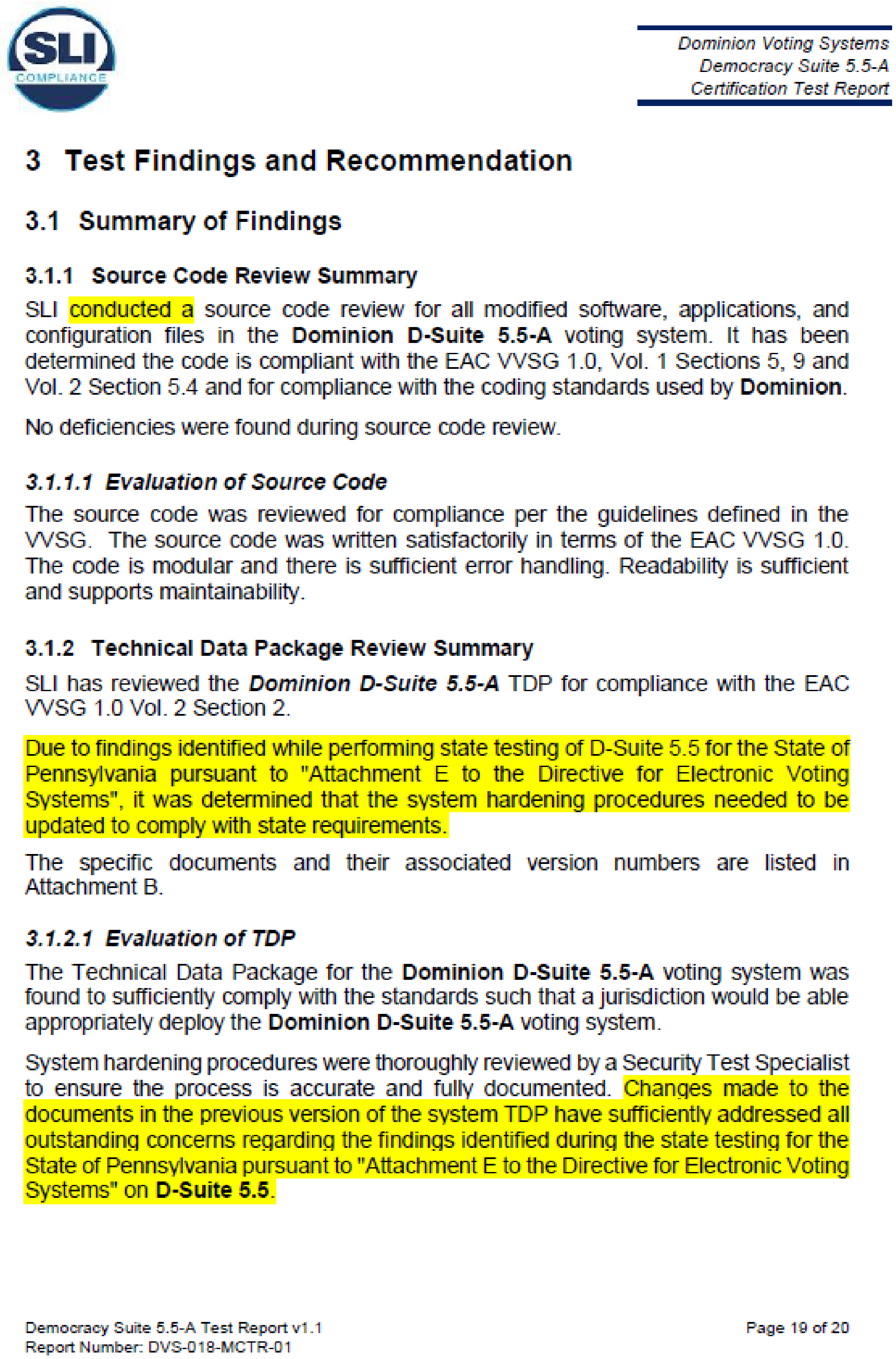
System level test suites included the following:

- **General Election, Pennsylvania Straight Party Method**

  A General Election was executed to test all variations of the Pennsylvania Straight Party Method, to ensure all modifications and Straight Party functionality are working correctly as documented, and in accordance with the VVSG 1.0 requirements. This General election included N of M voting, partisan offices, non-partisan offices, Pennsylvania straight party method, ballot formatting, precincts and districts, precinct level voting, as well as tally and reporting functionality. These tests incorporated the ICX, ICP, and ICC devices.

- **Closed Primary Election**

  A Closed Primary Election was executed that included N of M voting, partisan offices, non-partisan offices, straight party voting, ballot formatting, precincts and districts, precinct level voting, as well as tally and reporting functionality. These tests incorporated the ICX, ICP, and ICC devices.



3 Test Findings and Recommendation

3.1 Summary of Findings

3.1.1 Source Code Review Summary

SLI conducted a source code review for all modified software, applications, and configuration files in the **Dominion D-Suite 5.5-A** voting system. It has been determined the code is compliant with the EAC VVSG 1.0, Vol. 1 Sections 5, 9 and Vol. 2 Section 5.4 and for compliance with the coding standards used by **Dominion**.

No deficiencies were found during source code review.

3.1.1.1 Evaluation of Source Code

The source code was reviewed for compliance per the guidelines defined in the VVSG. The source code was written satisfactorily in terms of the EAC VVSG 1.0. The code is modular and there is sufficient error handling. Readability is sufficient and supports maintainability.

3.1.2 Technical Data Package Review Summary

SLI has reviewed the ***Dominion D-Suite 5.5-A*** TDP for compliance with the EAC VVSG 1.0 Vol. 2 Section 2.

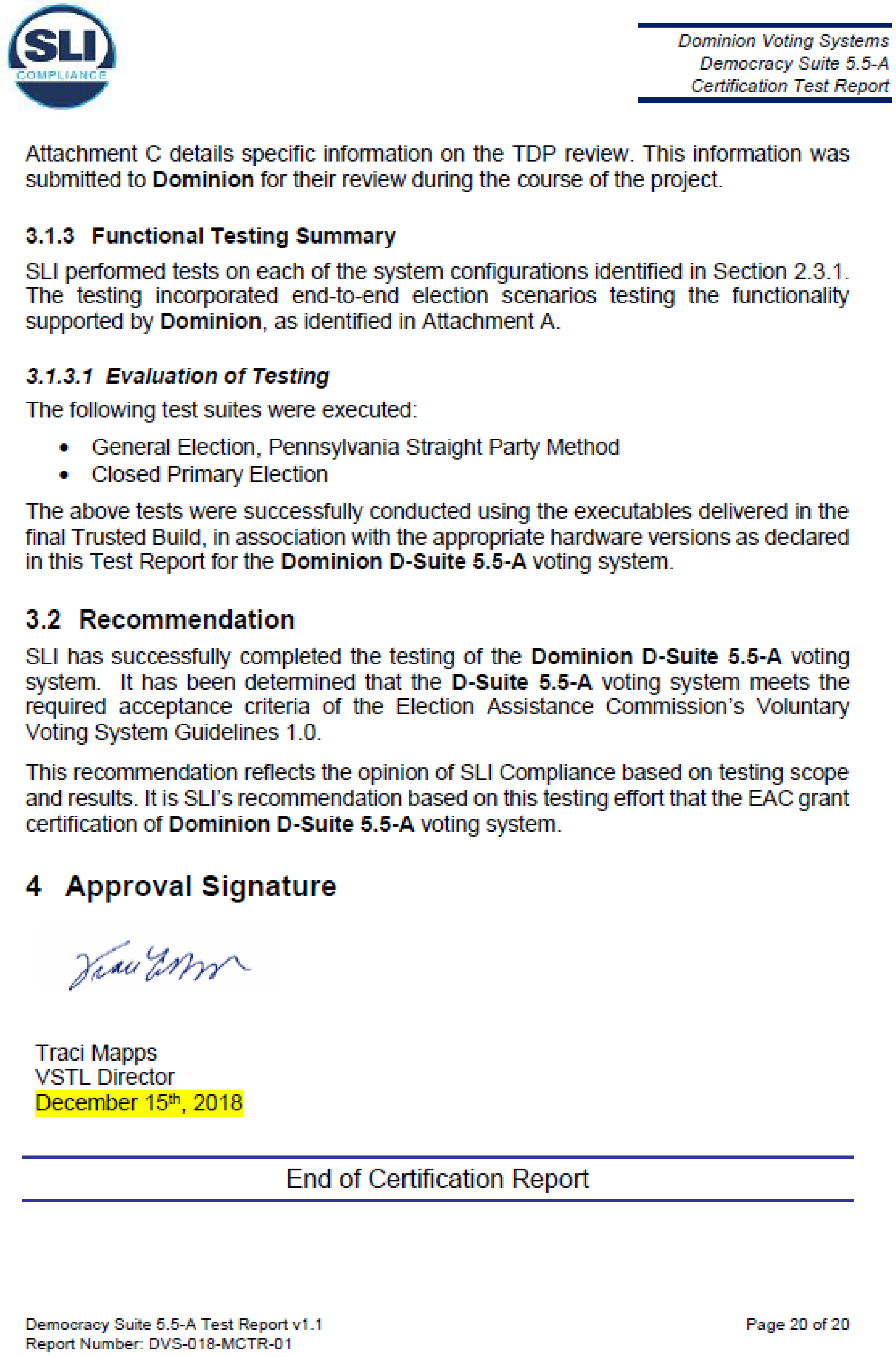
Due to findings identified while performing state testing of D-Suite 5.5 for the State of Pennsylvania pursuant to "Attachment E to the Directive for Electronic Voting Systems", it was determined that the system hardening procedures needed to be updated to comply with state requirements.

The specific documents and their associated version numbers are listed in Attachment B.

3.1.2.1 Evaluation of TDP

The Technical Data Package for the **Dominion D-Suite 5.5-A** voting system was found to sufficiently comply with the standards such that a jurisdiction would be able appropriately deploy the **Dominion D-Suite 5.5-A** voting system.

System hardening procedures were thoroughly reviewed by a Security Test Specialist to ensure the process is accurate and fully documented. Changes made to the documents in the previous version of the system TDP have sufficiently addressed all outstanding concerns regarding the findings identified during the state testing for the State of Pennsylvania pursuant to "Attachment E to the Directive for Electronic Voting Systems" on **D-Suite 5.5**.



Attachment C details specific information on the TDP review. This information was submitted to **Dominion** for their review during the course of the project.

3.1.3 Functional Testing Summary

SLI performed tests on each of the system configurations identified in Section 2.3.1. The testing incorporated end-to-end election scenarios testing the functionality supported by **Dominion**, as identified in Attachment A.

3.1.3.1 Evaluation of Testing

The following test suites were executed:

- General Election, Pennsylvania Straight Party Method
- Closed Primary Election

The above tests were successfully conducted using the executables delivered in the final Trusted Build, in association with the appropriate hardware versions as declared in this Test Report for the **Dominion D-Suite 5.5-A** voting system.

3.2 Recommendation

SLI has successfully completed the testing of the **Dominion D-Suite 5.5-A** voting system. It has been determined that the **D-Suite 5.5-A** voting system meets the required acceptance criteria of the Election Assistance Commission's Voluntary Voting System Guidelines 1.0.

This recommendation reflects the opinion of SLI Compliance based on testing scope and results. It is SLI's recommendation based on this testing effort that the EAC grant certification of **Dominion D-Suite 5.5-A** voting system.

4 Approval Signature

Traci Mapps
VSTL Director
December 15th, 2018

End of Certification Report

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KNOWiNK Testing Policies and Procedures

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Section 13 – Application Lifecycle Management and Release Management Plan

File 13-3 ALM Map

13.3 Provide a generic map or description of your system development lifecycle (SDLC) process for implementing the proposed SVS, GASOS staff required for each SDLC step, your personnel or resources for each step, and provide a generic timeline that is representative of a typical installation for an entity similar to the GASOS.

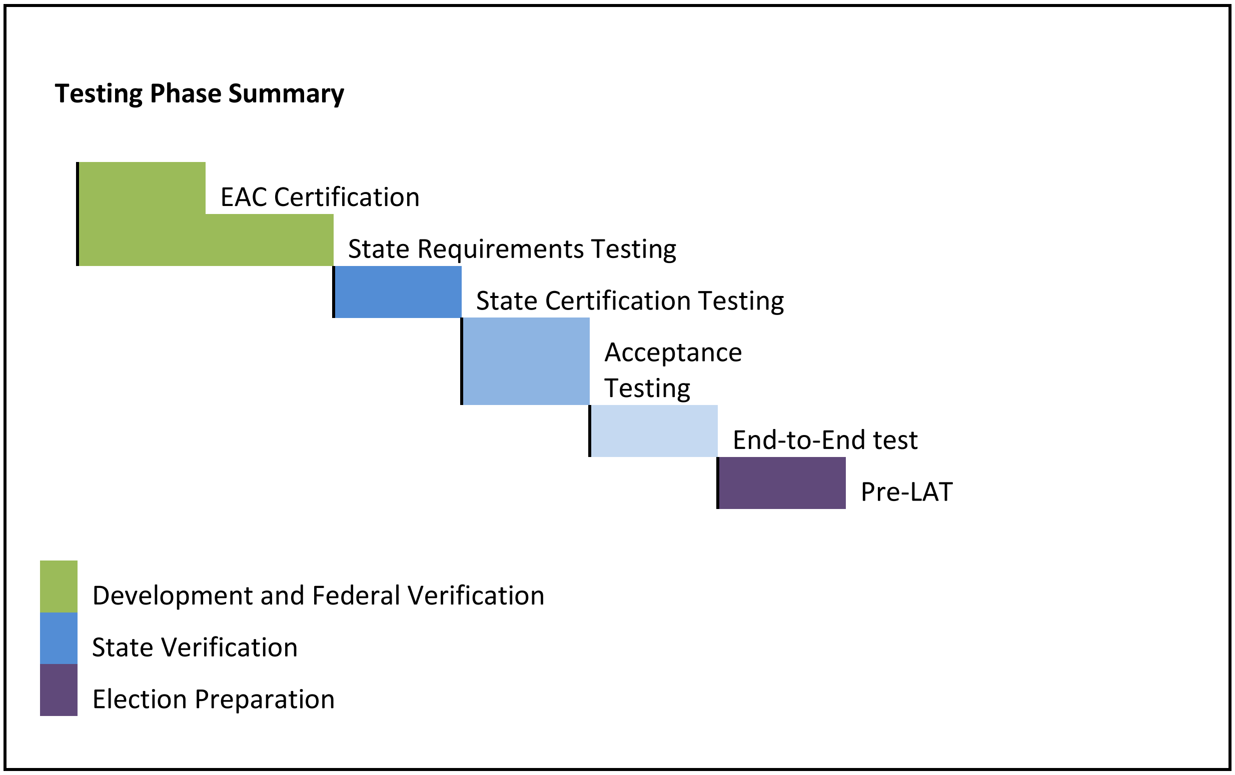
Dominion

All Dominion products that comprise the Democracy Suite platform follow the best software development practices, which include additional source code quality and security procedures. All software programs satisfy recommended coding standards, as well as code styling guidelines as required by EAC VVSG standards. Automated code review processes are in place, that verifies compliance with industry accepted coding standards for programming languages used. In addition, proper system and software hardening procedures are clearly defined and regularly tested. Testing is performed on the lower source code level using code analysis tools, and on the system-level using Nessus vulnerability testing tool. Data integrity and confidentiality is also implemented according to NIST defined and FIPS validate procedures and algorithms.

Dominion uses multi-level assurance and quality control processes to ensure that all elements of our integrated voting system perform properly with every use. Dominion uses a top tier contract manufacturer, based in the United States, and recognized as a leader in the industry for manufacturing. Internal acceptance testing is performed on each voting system on receipt from the manufacturer. By the time our products are purchased by the customer, they have gone through these three full rounds of acceptance testing. Independent reviews of election databases are conducted prior to Logic and Accuracy testing. We recommend (and support our customers to conduct) precinct-level pre-election testing. In addition to this rigorous testing and control program designed to catch errors, Dominion Voting regularly conducts process audits of our acceptance testing, and programming processes to ensure that errors never occur.

Dominion employs more than 50 Developers and individuals associated with the testing and certification process. This amounts to tens of thousands of hours dedicated annually enhancing and upgrading existing versions and developing new products, functionalities and services for future releases. A development and certification timeline is highly dependent on EAC testing labs and the EAC itself to comply with timely reporting and awarding of certifications.

The below roadmap provides a general overview of the process of testing an approval; however, the amount of time spent on each individual phase varies greatly by the scope of each initiative.



Dominion Voting tests its equipment to the highest standards in the industry. Our test plan is multi-layered and designed to complement State tests if applicable. Key attributes of the test plan are as follows:

1. **EAC Certification** – Dominion products are certified as EAC compliant. This is the highest certification standard in the industry and is your assurance that all products have undergone the highest level of testing.

2. **State Requirements Testing** – Dominion Engineers work to configure the EAC certified platform to meet the State of Georgia's specific certification requirements.

3. **State Certification Testing (If Applicable)** – Dominion's team works with the Secretary of State's office to demonstrate compliance of the system with Georgia requirements.

4. **Acceptance Testing** – Each component of the system is tested for functionality at the customer site. Dominion will provide training and documentation to officials to assist them in undertaking this task.

5. **End-to-End Test** – Dominion will work with Georgia to conduct end-to-end testing. We recommend that this test is completed following EMS training on a project reflecting Election Day requirements. In this test, an election project is created, and a representative sample of tabulators is programmed. Test ballots with known results are

prepared and cast. Results are uploaded into the election management system and reports are generated. The results are then compared to the expected outcomes to verify the system is performing properly. This test is performed on site at the customer warehouse.

6. **Pre-Election Logic and Accuracy Testing** – In advance of all elections, Dominion Voting recommends that Logic and Accuracy Testing of each voting system is tested with final Election Day ballots. This complete end-to-end test provides certainty that the system will perform as planned on Election Day. This test is performed on site at the customer warehouse.

7. **Automated Test Deck Creation** – The creation of automated, comprehensive test decks is an optional service provided by Dominion to assist customers in conducting Logic and Accuracy testing. Using the Election Day database, a series of pre-marked ballots are generated based on a computer algorithm designed to provide the highest assurance of system accuracy. When scanned these decks create known outcomes that can be compared with tabulated results. The elimination of error due to mistakes in hand-marking provides more confidence in test results.

Georgia Upgrades and Support

Dominion understands that election officials need to ensure that the significant investment required to upgrade a voting system is made with confidence and peace of mind that the technology will keep up with changing requirements and public expectations. As detailed above, Dominion’s development team is continually working on refining existing products and functionality, leading to annual VVSG certification and/or VSTL Testing campaigns with the EAC, as well as state certifications as required.

As your partner, Dominion will inform the State on all projects on-going that might impact new product releases and enhancements for the system being deployed over the next nine to ten months. This discussion will be part of the kick off and planning meetings to held at the beginning of contract performance.

As each upgrade and enhancement is unique in terms of the project scope and time required to implement, Dominion will assure the State and counties have the proper support. This will include individual team assignments of individuals from our Atlanta based office or Subject Matter Experts from our office located nationally to provide hands-on support, updated documentation and applicable training sessions. Every aspect of the implementation will be considered and discussed with the State to ensure proper rollout and implementation at both the State and County level.

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Section 14 – Current Equipment Inventory and Production Capacity

File 14-1 Accept Test

14.1 Describe your plan to deliver all acceptance tested SVS components and associated peripherals to the GASOS and each county election office in Georgia during the first quarter of 2020.

Dominion

Dominion will occupy and operate a launch and support facility in the Metro Atlanta area, conveniently located to the new GASOS facility on Interstate North Parkway in the 175 Corridor. Our facility will house the inventory of equipment and software which will permit Acceptance Testing to be performed in an efficient and timely manner. We intend to establish an internal Repair Depot department to immediately address any issues during Acceptance Testing and to address issues that arise during the initial warranty period. The facility will provide space to house the Project team members, product specialists and subcontractor partners in this effort.

Equipment required for the November Pilot election will be in the launch and support facility in late July ready for Acceptance Testing prior to being delivered to the participating pilot counties in Phase 1.

Beginning in August, we intend to receive voting system equipment and components monthly through November 30, 2019. By receiving items monthly, we and the GASOS will be able to stay abreast of Acceptance Testing rather than waiting until after the November Election is complete to begin.

We intend to begin distribution to the remaining counties immediately after the November 2019 election. Our delivery schedule will follow the quantities as defined in Attachment O, Phase 2 – Part 1, but we will be able to deliver ahead of schedule if permitted by the GASOS.

Completion of Phase 2 – Part 2 will be scheduled for completion by December 31, 2019 if not earlier. This will allow us to remain ahead of the schedule described in the RFP thus avoiding undue pressure on the State or the Counties as we prepare in January to conduct training across the State. We will begin training and preparing election databases training county staff and poll workers in a systematic and quality manner for the March 2020 Presidential Preference Primary with the slight advantage having extra time will afford us.

Dominion has provided our acceptance testing proposed dates within the timeline of Section 12 of this RFP response.

Procurement and Delivery

Procurement will be conducted in a manner that allows the coordination of equipment, supplies and consumables to be shipped directly to Dominion's facility in Metro Atlanta near the GASOS offices. During the procurement phase of the project, all the commercial off the shelf components used in our election system are purchased. Dominion will deliver all required equipment on the timeline outlined in the project plan. While it would be preferable for all parties to identify final quantities of all supplies and consumables required for Election Day on the initial contract, provision in the project plan has been made to allow incremental orders to be placed following change management processes.

Installation & Acceptance Testing

The State of Georgia is responsible for User Acceptance Testing. Dominion will provide an onsite presence to support acceptance testing performed by the State. Acceptance testing involves a visual inspection of the voting platforms, successfully completing a series of internal diagnostics, and successfully tabulating ballots from a sample test election. Dominion provides documentation and training for client technicians, as well as warehouse set-up guidelines for inbound acceptance testing.

Preparation for Acceptance Testing

Dominion will provide guidelines and checklists to the GASOS for acceptance testing and coordinate dates with the staff for software installation. This includes assessing suitability and identifying any modifications required, identifying areas for each process including a secure area for inventory control, preparing necessary acceptance documentation, and ensuring all necessary supplies are available.

Installation

Dominion will configure, install and test all software including the operating system and application software and set up the solution including all hardware and connections provided as part of the system. This stage will occur prior to delivery to the counties. These items include:

ImageCast X and ICP Voting Terminals - System Acceptance Testing:

Physical inspection of equipment
Functional testing using provided test materials

ImageCast Central – System Acceptance Testing:

Physical inspection of equipment
Functional testing using provided test materials

EMS Acceptance Testing:

Utilization of the EMS system to restore or create a simple election project
Creation of sample election files and ballots for in-person and ImageCast Central voting system
Directly load sample results from voting terminals
Create Election Results Reports

Following the testing and approval by the GASOS, Dominion will follow a logistics plan for delivery to the counties including minimal acceptance testing at each county.

KNOWiNK

[redacted]

Section 14 – Current Equipment Inventory and Production Capacity

File 14-2 Equip Spec

14.2 Provide your SVS equipment specifications and full inventory required (PPSs, CSDs, BMDs, EPolls, etc.).

Dominion

Election Management System (EMS)

Ballot building is conducted using the Election Event Designer module of Democracy Suite, version 5.5A. Dominion is proposing 175 licensed copies of the Democracy Suite set of products including 183 licenses of Adjudication, 175 licenses of Automated Test Decks, and 175 licenses of UOCAVA modules. The increased number of Adjudication modules is due to select counties having more than one of each due to volume of absentee ballots printed and cast in major elections.

ELECTION EVENT DESIGNER
RESULTS TALLY & REPORTING
DUAL THRESHOLD
DEMOCRACY SUITE®
AUDITMARK™
MODULES
VOTING CHANNELS

At the heart of our complete voting system solution is Democracy Suite, a robust and tested Election Management System that drives all voting channels out of a single comprehensive database; mail-in ballots, in person voting, accessible voting, and Uniformed Overseas Citizens Absentee Voting Act (UOCAVA)/Remote Accessible Vote by Mail(RAVBM). All pre-election and post-election tasks utilize the same database. From ballot layout to results reporting on Election Night, Democracy Suite is a complete, end-to-end elections solution that provides a single, powerful and versatile platform for election management.

Existing functionality and ongoing development of Democracy Suite centers around providing free and fair elections while considering the needs of our customers for easy to use and intuitive products, efficient processes, and accurate and transparent results for all ballots cast.

Democracy Suite is comprised of two modules: Election Event Designer and Results, Tally and Reporting.

Quantity: 175 licenses

Ballot Marking Devices (BMD)

The proposed Ballot Marking Device is the ImageCast X Prime as certified under Democracy Suite 5.5A.

ImageCast Prime X – Ballot Marking Device

ImageCast X Prime 21" Tablet Specifications	**Ballot Marking Device Printer Unit Specs**
Manufacturer: Avalue Model: HID-21V OS: Android 5.1.1. Processor: Intel Celeron J1900 Power: DC 19V input Weight: 19.5 lbs (including battery)	Model: M402dn Power: DC 19V input Weight: 19 lbs Dimensions: 8.5" H x 15" W x 14" D

Dimensions: H 22” x W 13.5” x D 2.9” Battery Backup Life: 2 hour minimum	

Quantity - ImageCast X Prime BMD’s is 30,050 as per Attachment O. Dominion is proposing 30,050 Standard ICX Voting Booths.

Polling Place Scanners (PPS)

The proposed Polling Place Scanner is the ImageCast Precinct as certified under Democracy Suite 5.5A.

ImageCast Precinct
Model number: PCOS-330A 16V AC **OS:** Linux **Processor:** NXP ARM Cortex-A9 Dual Core 1GHz **Memory:** 2GB **Modem:** External Multi-Tech HSPA USB Modem **Weight:** 14 lbs. **Dimensions**: 17” x 13” x 3.5”

ImageCast Precinct Ballot Box

The ImageCast Precinct includes a plastic ballot box to receive cast ballots directly from the ImageCast precinct tabulator. The ballot box contains several key elements such as multiple storage compartments (main, diverted, auxiliary), multiple locks and doors, and access control monitoring. The ImageCast Precinct and attached ballot box are integrated components of the voting system, and it includes security arrangements to prevent unauthorized access to the tabulation component and a locking access door for all ballot locations.

The capacity of the ballot box exceeded 1,500 sheets for 11-inch, 14-inch, 17-inch, and 22-inch ballots with 65lb, 80lb, and 100lb paper weights.
The overall size of the ballot box with the lid on is 25" (W) by 38" (D) by 44" (H) and the weight is 85 pounds.

Quantity – Dominion is proposing 3,500 ICP Precinct Scanners in accordance to Attachment O. Each scanner comes with a Ballot Box, 3,500 Ballot Boxes.

Central Scanning Devices (CSD)

The proposed central scanning device is the ImageCast Central as certified under Democracy Suite 5.5A. The ImageCast Central can be paired with two scanners including the high speed Canon G1130 and, for smaller counties with limited scanning needs, the Canon M160ii.

ImageCast Central

Includes Canon DR-G1130 scanner, Dell OptiPlex 7440 AIO computer, one 8GB flash memory card, one i-Button (black), one i-Button Programmer with USB Adapter, patch cable 25', Lexar LRW400CRBNA reader.

Dell OptiPlex 7440 AIO Computer Specs:
Processor: Intel® Core™ i3-6100 Processor (Dual Core, 3MB, 4T, 3.7GHz, 65W) ...
Operating System: (Dell recommends Windows 10 Pro.)
Monitor: 23.8" WLED Full-HD AIO Non-Touch Display.
Memory: 1 4GB2 DDR4 at 2133MHz. ...
Hard Drive: 2.5 inch 500GB 7200rpm Hard Disk Drive
Approximate weight: 15.9 lbs
Approximate Dimensions: 15.5”x22.6”x2.5”

Scanner: Canon Model DR-G1130 Specs
Feeder Capacity: 48 mm stack or 500 sheets of 80 g/m² (20 lb bond)
Scanning Resolution: 150 x 150 dpi, 200 x 200 dpi, 240 x 240 dpi, 300 x 300 dpi, 400 x 400 dpi, 600 x 600 dpi
Scanning Speed: B&W 100 ppm Portrait/130 ppm Landscape
Power: AC 100V (50/60Hz), AC 120V (60Hz), AC220-240V (50/60Hz)
Approximate weight: 50.3 lbs
Approximate dimensions: 18.9”x21.1”x12.4”

Scanner: Canon M160ii
Feeder Capacity: 60 sheets 21 lbs. bond
Scanning Resolution: 150 x 150 dpi, 200 x 200 dpi, 240 x 240 dpi, 300 x 300 dpi, 400 x 400 dpi, 600 x 600 dpi
Scanning Speed: B&W 60 ppm
Power: DC24V 1.0A
Approximate weight: 7 lbs
Approximate dimensions: 11”x 10” x 9”

Peripherals

The proposed system includes various peripheral items including:

Product	Description	Quantity
Server Kit	Includes PowerEdge R630 rack server, 24 port switch, 24" monitor, keyboard/mouse, patch cable, Cepstral, Avast. 	4
EMS Workstation	Includes Dell T3420, 24" monitor, iButton programmer, high speed media reader, patch cable, smart card reader/writer. 	171
Adjudication Workstation	Includes Dell T3420, 24" monitor, SQL Server 2016 CAL, cables, Windows 10 Pro.	183

Voter Activation Cards	Smart Card to activate voting session on the ImageCast X Prime. 	3 per device
Uninterruptible Power Supply	Backup power supply for precinct locations. 	2,913

Audio Tactile Interface	Accessibility units for ImageCast X includes ATI unit, headphones and connection cord. 	2,754

EQUIPMENT FOR THE POLL PAD® ELECTRONIC POLL BOOK					
ITEM	MAKE	MODEL	SIZE	DESCRIPTION	QUANTITY PROPOSED
iPad tablet	Apple	MP2F2LL/A	12" (H) x 8.68" (L)	The iPad has a touchscreen/keyboard and a shockproof clear case. The iPad has a battery life of approx. 10 hours.	8,000
Encoder/iOS Reader	FEITAN Technologies Co., Ltd.	iR301	2.28” x 1.8” x .3	The Mfi certified lightning port contact card reader connects securely to the iPad lightning port and include a micro USB cable.	8,000
iSync Drive	KNOWiNK	iSD-110	2” x 1” x .25”	KNOWiNK’s secure proprietary removable memory device, the iSync flash drives.	2,800*
Stand for iPad	AI Data	i360		The iPad stand is durable and user friendly.	8,000
Scanning tray	KNOWiNK	ISP103B-KN2-1	5” (L) x 2.5” (W) x 4.5”(H)	KNOWINK’S patented scanning trade scans barcodes on voter ID cards or state identification cards.	8,000
Styluses	AI Data	ISP-1010-KNO		Poll workers and voters may use the styluses or their finger for the iPad’s capacitive touch screen.	16,000
Carrying case	Nanuk	910	14.3" x 11.1" x 4.7"	Shockproof weatherproof foam-fitted case.	8,000
Thermal printer (optional)	Star Micronics	TSP650ii	140 (W) x 132 (H) x 203.5 (D) mm	The Star Micronics printer is the original printer used with KNOWiNK’s system. This printer requires AC power.	(Optional. The printer pairs with one Poll Pad.)

Section 14 – Current Equipment Inventory and Production Capacity

File 14-3 Replacement

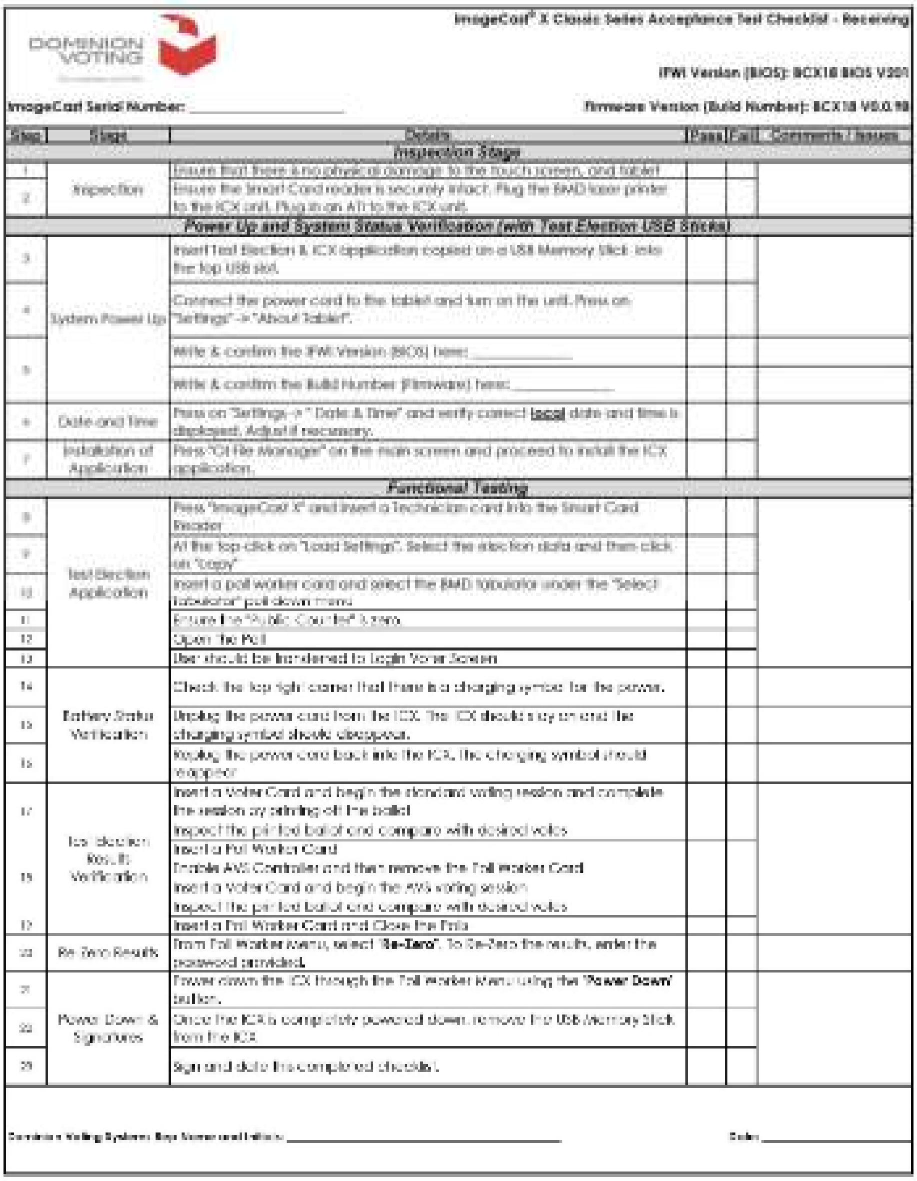
14.3 Identify the replacement process and cycle time for equipment that fails acceptance testing.

Dominion

Dominion proposes a two-step, on-site acceptance testing using a checklist developed with input from the Georgia project team. The full acceptance testing will be conducted at the Dominion facility equipment is received and will entail full end-to-end testing and physical inspection to ensure that the equipment received operates in conformance with Georgia-specifications. Any failed items are set aside for repair or replacement depending on the severity of the issue found. We will establish a Depot Repair facility within the warehouse setting and makes repairs as noted in the performance of the Acceptance testing. After repair the units will be reentered in the acceptance testing process. If a serious failure occurs, Dominion will replace the unit so as to not slow or impede the acceptance testing process.

For failures in the field after delivery to the counties, the Depot Repair facility will remain in place through the initial warranty period of June 30, 2021.

On the following page is a sample checklist for review:



ImageCast® X Classic Series Acceptance Test Checklist - Receiving

IFWI Version (BIOS): BCX18 BIOS V201

ImageCast Serial Number: ____________________

Firmware Version (Build Number): BCX18 V0.0.98

Step	Stage	Details	Pass	Fail	Comments / Issues
Inspection Stage					
1	Inspection	Ensure that there is no physical damage to the touch screen, and tablet			
2		Ensure the Smart Card reader is securely intact. Plug the BMD laser printer to the ICX unit. Plug in an ATI to the ICX unit.			
Power Up and System Status Verification (with Test Election USB Sticks)					
3	System Power Up	Insert Test Election & ICX application copied on a USB Memory Stick into the top USB slot.			
4		Connect the power cord to the tablet and turn on the unit. Press on "Settings" -> "About Tablet".			
5		Write & confirm the IFWI Version (BIOS) here: ______________			
		Write & confirm the Build Number (Firmware) here: ______________			
6	Date and Time	Press on "Settings-> " Date & Time" and verify correct **local** date and time is displayed. Adjust if necessary.			
7	Installation of Application	Press "CI File Manager" on the main screen and proceed to install the ICX application.			
Functional Testing					
8	Test Election Application	Press "ImageCast X" and insert a Technician card into the Smart Card Reader			
9		At the top click on "Load Settings". Select the election data and then click on "Copy"			
10		Insert a poll worker card and select the BMD tabulator under the "Select tabulator" pull down menu			
11		Ensure the "Public Counter" is zero.			
12		Open the Poll			
13		User should be transferred to Login Voter Screen			
14	Battery Status Verification	Check the top right corner that there is a charging symbol for the power.			
15		Unplug the power cord from the ICX. The ICX should stay on and the charging symbol should disappear.			
16		Replug the power cord back into the ICX. The charging symbol should reappear			
17	Test Election Results Verification	Insert a Voter Card and begin the standard voting session and complete the session by printing off the ballot Inspect the printed ballot and compare with desired votes			
18		Insert a Poll Worker Card Enable AVS Controller and then remove the Poll Worker Card Insert a Voter Card and begin the AVS voting session Inspect the printed ballot and compare with desired votes			
19		Insert a Poll Worker Card and Close the Polls			
20	Re-Zero Results	From Poll Worker Menu, select "**Re-Zero**". To Re-Zero the results, enter the password provided.			
21	Power Down & Signatures	Power down the ICX through the Poll Worker Menu using the "**Power Down**" button.			
22		Once the ICX is completely powered down, remove the USB Memory Stick from the ICX.			
23		Sign and date the completed checklist.			

Dominion Voting Systems Rep Name and Initials: ______________________________ **Date:** ____________

If equipment fails acceptance testing, please call KNOWiNK's Client Services department at 855-765-5723 x3 to see if a repair can first be provided through the telephone.

In the rare case that an iPad fails within the warranty period, a device and peripherals may be returned and in their case to KNOWiNK. After being informed of the device failure, KNOWiNK will promptly send the exchange equipment. Any peripheral that fails within the warranty period can be similarly returned and replaced.

An equipment purchase quote can also be requested through Client Services.

Section 14 – Current Equipment Inventory and Production Capacity

File 14-4 Fail Rates

14.4 Identify testing failure rates currently seen on new deployments of implementations similar to this project.

Dominion

Based on the volume of units installed across the United States, we are providing a snapshot of several clients with a similar product mix and unit deployments. Field anomalies described as "failures" below consisted mainly of hardware functionality or user error issues that were either corrected through a troubleshooting process or required machine replacement. No software related anomalies were reported.

Colorado Installations:

Colorado initially installed 910 ImageCast X 15" units across the state and experienced a total of eight failures. In addition, Colorado is upgrading their inventory to the ImageCast X Classic units with the 21" touchscreen. Of the 219 new units, a total of one failure has been reported.

Michigan Installations:

In the state of Michigan, 65 of 83 counties selected Dominion for their new voting system, including 1,970 ImageCast X touchscreen interfaces with Ballot Marking Device. An additional 400+ ImageCast X units were deployed in 2018. The service call rate for the ImageCast X deployment was less than 2% and primarily consisted of easily addressed user questions or errors that were resolved by phone.

Clark County, Nevada Installation:

Clark County, Nevada currently has 5,000 ImageCast X units deployed with a failure rate of 1.56%. Additionally, over 7,000 units are deployed in 16 counties throughout the state of Nevada with an overall failure rate of less than 2 percent.

Dominion’s reliability of the proposed voting solution is evidenced by the low rate of failure for the current customers noted above.

For both hardware and software, our testing failure rates for similar implementations has been less than one in 1,000.

Section 15 – Lifecycle Inventory Management and Support

File 15-1 Spares

15.1 Identify the spare inventory management model to be to be used with this Contract.

Dominion

Dominion maintains inventories of spare voting equipment (both vote counters and accessible voting devices) in case of disasters or equipment failure. In addition to spare equipment and systems, Dominion also maintains an inventory of spare parts that can be used to repair systems with minor damage. Supplementary units are deployed in the event of a major hardware failure, and their initial inclusion in the project plan is another preventative measure for this type of failure.

Dominion and Georgia will work closely to create and manage the spare inventory and replacement process to not only provide efficient and effective parts repair and returns to the State, but also to anticipate and prepare your parts pool and inventory for the high use seasons such as pre- and post-election preparations, yearly maintenance and, of course, Election Day. This preparation saved time and expense for warehouses in the pickup and return of equipment from a designated office and reduced the downtime for any machines. We look forward to continuing in this partnership and to make more improvements along the way.

Dominion will maintain a parts and components depot located near the GASOS facility on Interstate North Parkway after the need for the Dominion central facility lapses at the end of 2021. Dominion will provide the staffing necessary to repair or replace voting system components that fail to operate in conformance with specifications. The State will be required to deliver any failed components to the Dominion depot (at Dominion’s expense) for repair or replacement by Dominion. Alternatively, Dominion reserves the right to repair or replace failed components at the applicable voting system storage location.

Dominion is excited about the approach described regarding its spare inventory management. Dominion will be capable of delivering excellent service expediently. This will provide the State of Georgia cost savings and meet the unique needs of the State of Georgia.

Dominion is happy to discuss the most efficient and practical solution for spare inventory management upon request with the State of Georgia.

For all non-electronic accessories and consumables, KNOWiNK will keep stock of inventory to repair, replace or upgrade throughout the life of the contract (payment may be required to repair/replace/upgrade certain items). Repair of electronic hardware such as iPads, printers or wireless hotspots or replacement with identical models are subject to availability by manufacturer (payment may be required to repair/replace/upgrade certain items).

Section 15 – Lifecycle Inventory Management and Support

File 15-2 Supplier Replace

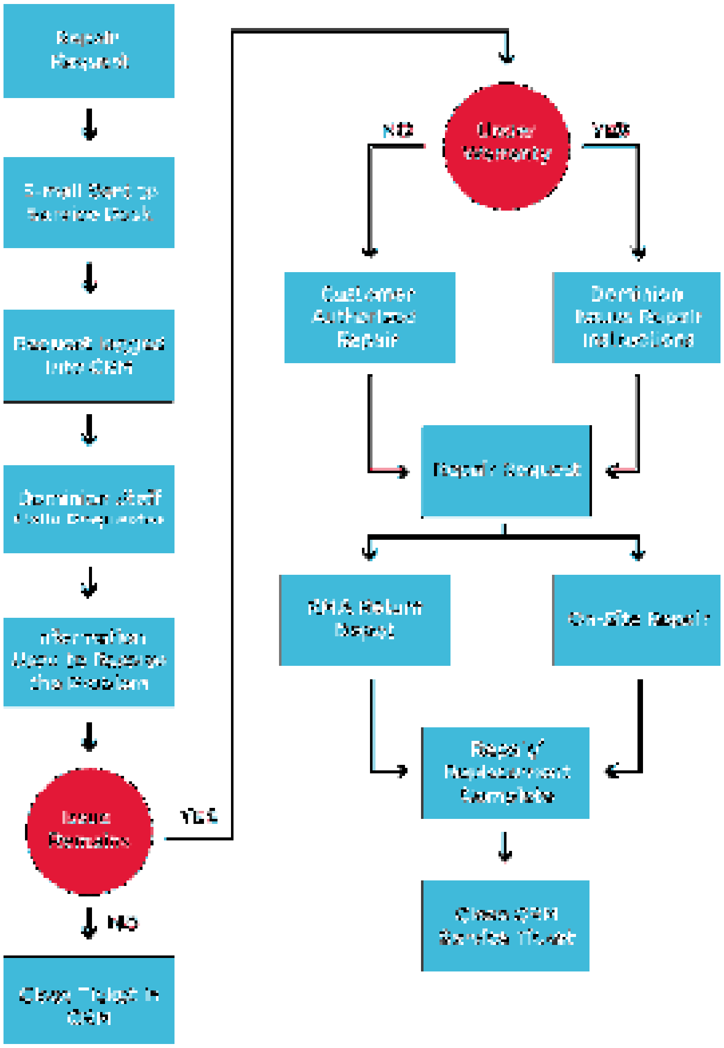
15.2 Identify SVS equipment that will be replaced by the Supplier.

Dominion will provide ongoing support to Georgia and County officials and collaborate with other Element Project Managers to ensure proper project oversight and prompt problem escalation for all SVS equipment. Below we provide a general overview of the process to coordinate all repair and maintenance actions with the State, County or authorized user. However, we would look to customize this process with consideration given to our facility in Atlanta and dedicated personnel.

Dominion and its team will use a Customer Relations Management system (CRM) database to capture service calls to ensure all issues are resolved effectively. Once a call/email is received, a work ticket is created and the initiating party will be contacted by a member of the service team.

Initial contact will be established after notification. At that time, additional troubleshooting instructions may be provided to help the service team better respond to the failure or defect. If the defect or failure cannot be addressed in this manner, a service representative will make the appropriate arrangements for resolution. The diagram to the right summarizes this process.

If a failed component is under warranty, a Dominion technician will schedule an onsite visit to repair / rectify the defective or failed component. Where a failed or defective component is not covered by warranty, a request for an on-site visit to assess and repair the failed / defective component may be made. Normal rates will apply.


Repair Request
E-mail Sent to Service Desk
Request logged into CRM
Dominion Staff Calls Requestor
Information Used to Resolve the Problem
Issue Remains
YES
NO
Close Ticket in CRM
Under Warranty
NO
YES
Customer Authorized Repair
Dominion Issues Repair Instructions
Repair Request
RMA Return Depot
On-Site Repair
Repair / Replacement Complete
Close CRM Service Ticket

Dominion will track and retain documentation on maintenance and repair activities. The County will be given paperwork stating completion of work performed and status of the Voting System. Warrantied equipment replacements and repair parts shall be new. At the conclusion of the warranty period and at the discretion of Georgia officials, responsibility for this function can be transferred to Georgia and County staff (or a suggested third party), who have completed a Dominion technician training course.

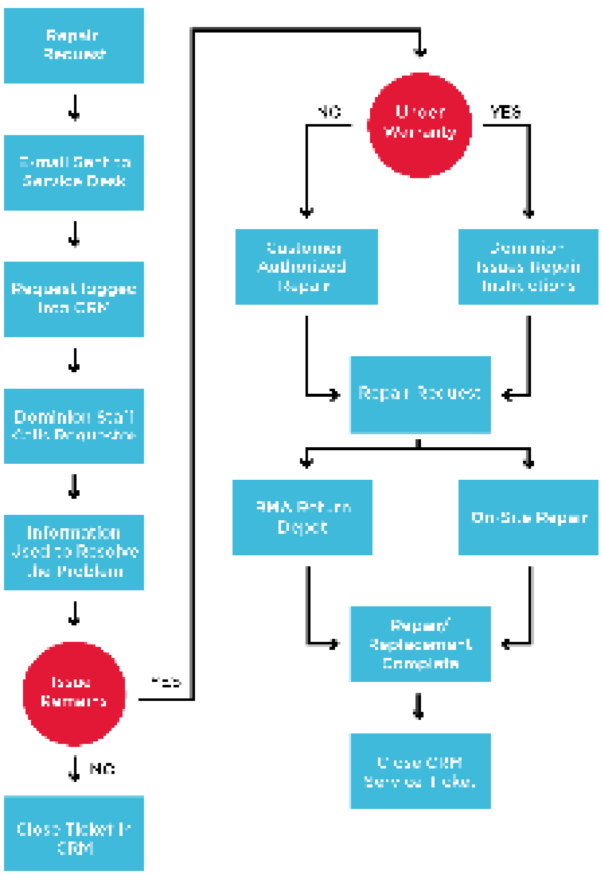
Section 15 – Lifecycle Inventory Management and Support

File 15-3 Repair Request

15.3 Describe the process for jurisdictions to submit requests for SVS equipment repair or purchase additional equipment.

Dominion

Typically, in the event that a component needs to be replaced or repaired, the customer boxes and returns the component to Dominion's repair facility. During the Implementation and Initial Warranty period, the county could ship the unit in question to the Atlanta based Dominion Repair Depot facility. Once repaired it will be delivered back to the county. If during a critical election cycle, Dominion will send a replacement loaner unit and swap with the repaired unit after the election. The loaner replacement unit will be shipped to the customer in the shortest timeframe possible. Dominion commits to providing the highest level of service to our customers. Depot or warehouse maintenance is planned in Georgia during the initial system implementation period. Following the warranty period, Dominion be willing to discuss a maintenance plan that works for best for the State.


Repair Request
E-mail Sent to Service Desk
Request logged into CRM
Dominion Staff Calls Requestor
Information Used to Resolve the Problem
Issue Remains
YES
NO
Close Ticket In CRM
Under Warranty
NO
YES
Customer Authorized Repair
Dominion Issues Repair Instructions
Repair Request
RMA Return Depot
On-Site Repair
Repair/ Replacement Complete
Close CRM Service Ticket

As detailed in response to File 15-2, Dominion and its team will use a Customer Relations Management system (CRM) database to capture service calls to ensure all issues are resolved effectively. Once a call/email is received, a work ticket is created and the initiating party will be contacted by a member of the service team.

Initial contact will be established after notification. At that time, additional troubleshooting instructions may be provided to help the service team better respond to the failure or defect. If the defect or failure cannot be addressed in this manner, a service representative will make the appropriate arrangements for resolution. The diagram to the right summarizes this process.

If a failed component is under warranty, a Dominion technician will schedule an onsite visit to repair / rectify the defective or failed component. Where a failed or defective component is not covered by warranty, a request for an on-site visit to assess and repair the failed / defective component may be made. Normal rates will apply.

Dominion will work with the State of Georgia in the event that they wish to purchase additional equipment to meet any and all of their election needs.

KNOWiNK

To purchase, jurisdictions can email sales@knowink.com (or by calling 855.765.5723 x2) with a request to purchase additional equipment and a quote will be emailed in return. For all equipment repair, jurisdictions would need to email support@knowink.com or call into our Client Services department at 855.765.5723 x3 to see if a repair can first be provided through the telephone. An equipment purchase quote can also be requested through Client Services.

Section 15 – Lifecycle Inventory Management and Support

File 15-4 Purchase Equipment

15.4 Describe the process for jurisdictions to purchase SVS peripherals (i.e. storage media devices, ballot storage boxes, batteries, etc.).

Dominion

Dominion would prefer the state and the counties consolidate the purchase of supplies, boxes, batteries, etc. based on the historical data we can help the state compile. Many of the voting system peripherals are different than in the past, so it makes economic sense to create a master plan during the implementation period for all major purchases and allow Dominion to work with the third-party suppliers and negotiate a fair arrangement for the State and Counties going forward. Dominion's management and project leaders could develop the scope of the ordering system and present ideas to the State.

KNOWiNK

As with additional equipment, jurisdictions can purchase SVS peripherals (sold by KNOWiNK) by emailing sales@knowink.com (or by calling 855.765.5723 x2), and a quote will be provided.

Section 15 – Lifecycle Inventory Management and Support

File 15-5 Purchase Consumables

15.5 Describe the process for jurisdictions to purchase consumables necessary to operate the proposed solution (i.e., paper, toner, etc.).

Dominion

In the event that the State of Georgia and participating jurisdictions need to purchase consumables, Georgia Election officials would work with the designated Customer Relations Manager to obtain the necessary consumables. Dominion will assist the State to determine the most cost-efficient and simple method to purchase consumables whether directly from Dominion or from a third-party vendor.

KNOWiNK

As with additional equipment, jurisdictions can purchase SVS consumables (sold by KNOWiNK) by emailing sales@knowink.com (or by calling 855.765.5723 x2), and a quote will be provided.

File 15-6 Common Repairs

15.6 Provide examples of common repair requests seen on like systems with other customers.

Dominion

Dominion's acceptance testing process, Logic and Accuracy testing prior to elections, and exceptional product support model limits common repair requests to mainly user issues that can be addressed by phone in most instances. Common repair items for the EMS may include:

- Replacement of roller kits for scanners
- Cleaning of scanner glass
- Physical damage to units from drops, which generally do not affect functionality

KNOWiNK

Some common repair issues seen with the Poll Pad solution:

- Physical damage to iPads or other hardware/accessories
- Software/data updates or fixes
- Printer or wireless hotspot firmware updates

Section 15 – Lifecycle Inventory Management and Support

File 15-7 Turnaround

15.7 Provide typical repair turnaround process and times.

Dominion

Dominion offers a variety of services to respond promptly and expeditiously to assist in the accomplishing of tasks, resolving issues and requests from the State. Our current service contract provides for onsite support for all of the services listed above and more. We strive to be accessible to assist the State staff not on set hours but on your hours when you need us. We believe that your urgency is ours and work diligently to assist in any way that we can.

When the scope of the project and voting system configuration is defined with the State, we will work together to outline an ongoing support and resource plan to meet your needs. Below are examples of some of the service resources we provide.

	Service	**Description**
1	Project Management	An assigned project manager will be the primary contact for all project needs. The Dominion Project Manager is responsible for all deliverables and services including, resource planning and coordination, product delivery, issue resolution and support.
2	Training	User and system training covering all products supplied.
3	Support Center	General support will be provided via phone and email support.
4	Ballot Definition	Dominion will provide on-site support for programming assistance in the preparation for all voting equipment.

5	Machine Programming	Support will be provided to the elections office and warehouse in the configuration and setup of voting machines.
6	Machine Maintenance	Preventative machine maintenance shall be performed prior to shipping and delivery. Dominion staff will be available to assist with questions or troubleshooting as determined by contract.
7	Onsite Technical Support	Onsite support will be provided for Early Voting and Election Day as determined by the contract.

Service Availability and Response

-Standard hours of all support staff availability are from 9:00 am to 5:30 pm Eastern Time, Monday to Friday, excluding public holidays.

-Support staff is available outside standard hours by mutual agreement of the parties and with 10 business days' prior written notice.

Phase	Type of Support	Initial Response	Estimation Response	Resolution
Outside an Election period	On-site, telephone, and video	Up to one business day	Up to 2 business days	Up to 10 to 15 business days
During creation of the Election database and ballots	On-site and telephone	Up to next business day	Up to 2 business days	Up to 3 business days
From ballot mailing to Election Day	On-site and telephone	Up to 12 hours	Up to next business day	Up to 2 business days
On Election Day	On-site	Immediate	60 minutes	Within 1 hour
From Election Day until Election certification	Telephone and video	Up to 12 hours.	Up to next business day	Up to 2 business days

During a recount	If required, on-site	Up to 6 hours	Up to next business day	Up to 1 business day

Issue Resolution Plan

Contact Details

The Dominion Project Manager will be the primary contact for the Customer for any technical or problem related issue. The Dominion Project Manager will have access to key resources on the Dominion project team as well as product and technical specialists and will be responsible for coordination of all support needs.

Tracking

All issues are tracked in Dominion's online trouble ticket system. A Dominion representative will take the service or support request from the customer and open a support ticket. This ticket may be assigned to a specialist for further triage and resolution.

Response and Resolution Times

Response and resolution times are measured from the time the incident is opened and by the support group.

Initial Response is when a ticket is opened and acknowledged by support staff.

Estimation Response is when the customer representative that logged the ticket is informed of an estimated resolution time by Dominion.

Subsequent Responses is the frequency with which the customer representative that logged the ticket is updated on the resolution status.

Resolution is the target time at which point an issue is resolved or a resolution plan is agreed to between the customer representative and Dominion.

Issue Escalation

If response times are not achieved during the resolution period, the following Dominion representatives should be contacted in order:

1. **Primary Contact** – Project Manager
2. **Second Contact** – Regional Sales Manager
3. **Third Contact** – Director, Eastern Region Operations
4. **Fourth Contact** – Executive Vice President, Operations

KNOWiNK

Poll Pad Customer Support and Product Maintenance

Client Support Services

KNOWiNK's experienced in-house team ensures exceptional maintenance services for all parts of the solution. This includes the Poll Pad and ePulse applications as well as hardware, software, peripherals and updates to firmware and software. We understand the importance of properly maintaining all aspects of the hardware and software of the solution to ensure that every election is a success. Our team exclusively provides election technology solutions, service and support.

Poll Pad Hardware

When you receive your Poll Pad solution, each iPad is pre-configured and contains the Aboriginal Victorian's Poll Pad application. Each iPad is enrolled in the licensed advance Meraki Mobile Device Manager (MDM).

Prior to delivering the solution, each Poll Pad will be configured, tested and secured in a shockproof waterproof case with custom-fitted foam. The peripherals will also be tested to ensure that they are ready and in working condition.

In the rare case that an iPad fails within the warranty period, a device and peripherals may be returned and in their case to KNOWiNK. After being informed of the device failure, KNOWiNK will promptly send the exchange equipment. Any peripheral that fails within the warranty period can be similarly returned and replaced.

Poll Pad iPad Application

KNOWiNK will configure the Poll Pad application to your specifications.

ePulse Election Management Suite

We will help configure ePulse and the Poll Pad application to your exact specifications. Our team is available throughout the life of the contract to provide support and service. Maintenance requiring downtime of the ePulse system is rare. When this is planned, KNOWiNK will notify the election authority in advance and will schedule downtime for a low-traffic time. If the jurisdiction has any maintenance service requests for ePulse, simply contact our client support team who will identify the issue, assign it a severity level, and quickly work to provide a solution.

Software / Firmware Updates

Prior to the release of a Poll Pad software update or Apple iOS update, KNOWiNK developers will always thoroughly test software or updates and postpone them, as necessary, to ensure there is no risk of application failure or a security issue during an election event. This maintenance of the application and hardware will continue for the life of the contract. Services provided as part of this maintenance include notification to the client when an update is scheduled, release notes describing any changes to the Poll Pad software or iOS version. When applicable, affected training materials will be updated and provided to the election authority to reflect the software updates.

The following table depicts all parts of the solution and specifies whether hardware is commercial-off-the-shelf or proprietary.

Hardware Descriptions for the Poll Pad Solution			
Item and Description	**Make**	**Model**	**COTS (Y/N)**

Poll Pad iPad Application	KNOWiNK	Poll Pad 3	N
ePulse Election Management Suite	KNOWiNK		N
iPad tablet: The iPad has a touchscreen/ keyboard and the clear case is shock-proof. The iPad has a battery life of approximately 10 hours.	Apple	MP2F2LL/A	Y
Stand for iPad: The Poll Pad stand is durable and user friendly.	AI Data	i360	N
Styluses: Each Poll Pad comes with two styluses.	AI Data	SP-1010-KNO	N
Carrying case: The shockproof and weatherproof case is extremely durable. So durable, in fact, we have never had a customer request a replacement case because they have never broken.	Nanuk	920	Y
Thermal Printer	Star Micronics	TSP650ii	Y
Wireless Connectivity - iPad comes equipped with WiFi capabilities. If the State requires additional hotspots or WiFi then we can offer the following.	Cisco Meraki	Meraki 42	Y

KNOWiNK has provided maintenance services and support for all 650 jurisdictional clients.

Ongoing service and maintenance

Maintenance services are available during regular business hours toll-free via phone and by email from 7am-7pm Central Time with extended Election Day hours.

On average, updates to the iPad's iOS and Poll Pad application are done twice a year. Updates will always be scheduled by KNOWiNK and typically occur one month or more before an election. We have provided a schedule with anticipated release dates below. The dates may vary based on your election dates and other factors, like whether there is an iOS update to release or changes to your Poll Pad application. Please note that if Poll Pad customizations are requested, additional Poll Pad software updates may be necessary. Occasionally three iOS updates from Apple may be released in a one-year term and we will work with you to schedule a convenient time. At a minimum, one Poll Pad update is required annually as a security measure.

Release Type	Anticipated Release
Poll Pad software (as needed)	September 1, 2019
Apple iPad iOS	September 1, 2019
Annual Poll Pad software release	March 1, 2020
Apple iPad iOS	September 1, 2020
Poll Pad software (as needed)	September 1, 2020
Annual Poll Pad software release	March 1, 2021
Apple iPad iOS	September 1, 2021
Poll Pad software (as needed)	September 1, 2021

Annual Poll Pad software release	March 1, 2022
Apple iPad iOS	September 1, 2022
Poll Pad software (as needed)	September 1, 2022
Annual Poll Pad software release	March 1, 2023
Apple iPad iOS	September 1, 2023
Poll Pad software (as needed)	September 1, 2020

Client participation in updates to the iPad's iOS and Poll Pad are required. The equipment will need to be updated and verified by your personnel. The election authority can push the updates out to each device via the licensed advance Meraki MDM.

Updates to the Poll Pad, iOS, and ePulse server are thoroughly tested before major releases. If a known vulnerability is issued for any software, a security patch release can be made within 48 hours. In the event of a data breach, we will follow the processes described in our Information Security Policy, which is available upon request.

The iPad and printer require very little to no maintenance to upkeep. We rarely have issues with our COTS or proprietary hardware.

As your selected vendor, we will work with the election authority to prepare a technology roadmap that addresses all the election authority's needs. KNOWiNK is continuously innovating software and support resources to provide jurisdictions with exceptional election event technology and service.

SERVICE LEVEL AGREEMENTS

- Full-time year-round customer support from 7am CT-7PM CT with extended hours leading up to, during and after an election.
- Hardware maintenance and warranty as required by the customer.
- Definition of functionality requirements to guide future upgrades and development.
- Statement of work timelines related to installation and Pre/Post Election support requirements.
- Training and documentation requirements and timelines as agreed upon by the customer.

Problem Resolution Procedures

Technical support issues are escalated through a three-tier customer support system. Tier one includes the toll-free customer support hotline, with customer support representatives available to answer general technical and process questions about the software platform. Issues may be escalated to tier two, which includes specialized technical representatives who have a more comprehensive understanding of the software. Escalation to tier three typically entails an actual code-related issue and will be assigned the software development team for review and resolution.

Support calls are immediately answered during business hours. KNOWiNK's belief and practice is no support call should ever go unanswered during business hours. After hours calls and emails are typically followed-up by a support team member fairly quickly.

KNOWiNK uses the Zen Desk system to record all incoming service requests as well as log all communications between KNOWiNK support and State staff. The client submits service requests via email and the help desk system automatically creates an open issue and notifies the support team a new issue has been created. If the ticket is not resolved within pre-set time parameters, the ticket is automatically escalated to the support staff superiors. This escalation system continues; if tier two client support cannot provide resolution, the issue is escalated to Tier 3 and our advanced troubleshooting team for further research. KNOWiNK ensures its customer support will be responsive, efficient and timely. Zen Desk tracks KNOWiNK client support's response and resolution times.

The support team follows the escalation procedures listed below.

Tier 1

Tier 1 agents are tasked with fielding general inquiries, defining ticket severity and providing immediate resolutions when capable. A Tier 1 issue, without an immediate resolution, that is assigned or is escalated to a severity level of High or above will be escalated to a Tier 2 representative.

Tier 2

Tier 2 agents are subject matter experts and will reassess and assign an appropriate severity level to the issue. A root cause analysis will be performed to determine systemic impact and facilitate a resolution. If no resolution is achieved or a root cause analysis determines escalation is required this issue is immediately escalated to Tier 3.

Tier 3

The Tier 3 team is comprised of stakeholders from Development, Quality Assurance, and the relevant subject matter experts from Client Services. The Tier 3 team will verify the findings of the initial root cause analysis or work to identify the root cause if none has been established. Once causation has been established, Tier 3 will expedite a resolution based on severity and systemic impact of the issue.

Issue Severity Classifications	
Severity	**Conditions**
Severity – Critical	Issue is typically reported during an election event. User has experienced a loss of functionality and work cannot reasonably continue or an essential part of the system is compromised and no credible workaround is available. A Critical status may be assigned to a case that results in the inability to satisfy business/legal requirements or disables critical portions of the application.
Severity – High	Issue is typically reported outside of an election event. User has experienced a loss of functionality and work cannot reasonably continue or an essential part of the system is compromised and no credible workaround is available. A high status may be assigned to a case that results in the inability to satisfy business/legal requirements or disables critical portions of the application.
Severity – Medium	Some business impact with no legal impact. The issue impacts the functionality of the software, but can be circumvented so that the software can be still be used to satisfy business and legal requirements. This priority is used to track resolution of non-critical items and could represent issues that might be assigned a higher priority dependent the impact on an upcoming election event.

Severity – Low	Minimal business impact with no pressing need for resolution. This priority is also used for general procedural questions, user feedback, tracking client information and standard help desk interactions.

Warranty; Limitation of Liability:

1.1. KNOWiNK warrants all products provided hereunder to be free from defects in material or workmanship under normal use and service for a period of one (1) year from the date of delivery. All repair covered by this warranty must be done by KNOWiNK, or other such warranty repair facilities of KNOWiNK as designated by KNOWiNK unless KNOWiNK specifically directs that this service be performed at another location. Any defect corrected within one (1) year and found to be within this scope of the warranty will be repaired by KNOWiNK and all charges for labor and material, will be borne by KNOWiNK. KNOWiNK warrants that all Professional Services will be performed in a professional and workmanlike manner. THIS CONSTITUTES THE SOLE WARRANTIES MADE BY KNOWiNK, EITHER EXPRESSED OR IMPLIED. THERE ARE NO OTHER WARRANTIES EXPRESSED OR IMPLIED WHICH EXTEND BEYOND THE FACE HEREOF, HEREIN, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

1.2. KNOWink makes no representations or warranties as to THIRD PARTY HARDWARE, IF ANY, PROVIDED BY KNOWink TO CUSTOMER, all of which is sold, licensed, or sublicensed to Customer “AS IS,” OTHER THAN AS MAY BE PROVIDED IN ANY PASS-THROUGH WARRANTY. KNOWink HAS NO RESPONSIBILITY OR LIABILITY FOR THIRD PARTY HARDWARE, IF ANY, PROVIDED BY DISTRIBUTORS OR OTHER THIRD PARTIES TO CUSTOMER. If KNOWiNK sells, licenses, or sublicenses any Third Party Hardware to Customer, KNOWiNK will pass through to Customer, on a nonexclusive basis and without recourse to KNOWiNK, any third-party manufacturer’s warranties covering the equipment or software, but only to the extent, if any, permitted by the third-party manufacturer.

1.3. Customer is solely responsible for any hardware or software purchased from an outside source. KNOWiNK will not be liable for such products.

1.4. Any tampering, misuse or negligence in handling or use of products provided hereunder renders the warranty void. Further, the warranty is void if, at any time, Customer or any third party attempts to make any internal changes to any of the components of the products provided hereunder; if at any time the power supplied to any part of the product exceeds the rated tolerance; if any external device attached by Customer creates conditions exceeding the tolerance of the product; or if any time the serial number plate is removed or defaced. OPERATION OF THE EQUIPMENT THAT RENDERS THIS WARRANTY VOID WILL BE DEFINED TO INCLUDE ALL OF THE POSSIBILITIES DESCRIBED IN THIS PARAGRAPH, TOGETHER WITH ANY PRACTICE WHICH RESULTS IN CONDITIONS EXCEEDING THE DESIGN TOLERANCE OF THE PRODUCT.

1.5. IN NO EVENT SHALL KNOWiNK BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES AND CUSTOMER'S REMEDIES SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF NONCONFORMING SERVICES, UNITS OR PARTS. EACH OF KNOWiNK'S MAXIMUM AGGREGATE LIABILITY HEREUNDER SHALL NOT EXCEED FEES RECEIVED BY SERVICE PROVIDER DURING THE 12 MONTHS PRECEDING THE APPLICABLE CLAIM.

Section 16 – Supply Chain Continuity

File 16-1 Supply Chain

16.1 Describe your measures in place and commitments to assure availability of products, components, software, services, and other deliverables for possible length of contract with renewals (15+ years). Describe whether second sourcing of generic or proprietary products is available or could be obtained by the GASOS or counties in the event of a failure or disruption in supply by the Supplier; price protection available to assure reasonable market prices for the life of the contract; and options available for services or upgrades from independent service organizations (if any) authorized or licensed by Supplier.

Dominion

Dominion utilizes a variety of extensive forecasting activities, product road mapping and the stocking of required inventory to ensure the availability of products, components, software services and other deliverables including the Commercially-Available-Off-the-Shelf hardware for our customers. Dominion maintains warehouses in San Leandro, CA, Jamestown, NY and McKinney, TX. Dominion will also occupy and operate a launch and support facility in the Metro Atlanta area, conveniently located to the new GASOS facility on Interstate North Parkway in the 175 corridor. The facility will house the inventory of equipment and software which will permit Acceptance Testing to be performed in an efficient and timely manner. We intend to establish an internal Depot Repair department to immediately address any issues during Acceptance Testing and to address issues that arise during the initial warranty period. The facility will provide space to house the Project team members, product specialists and subcontractor partners to help provide all services to the State of Georgia.

These long-term supply models are developed through a number of different techniques which include, but are not limited to:

- The purchasing and monitoring of safety stock inventories to permit the fast response to customer requests on active material. Forecasts based on historical and projected fallout rates are developed for each potential replacement part to determine the appropriate inventory stocking level.

- Last time buys for end-of-life materials stocking are generated by analyzing historical fallout rates to determine appropriate purchase levels through the life of the product as well as appropriate succession planning for next generation material.
- Quarterly Business Reviews are held with strategic partners which includes the manufacturers of ImageCast third-party Commercial-Off-the-Shelf components (printers, scanners, displays, laptop, servers, modems, etc.). This strategic alliance ensures a seamless supply chain transition as products develop from generation to generation.
- Detailed product road mapping activities are reviewed on a monthly basis both internally and externally to assess lines of supply. These activities ensure that Dominion has proactive transition plans which include:
    - Access to a new and developing products to permit the early testing and succession planning as well as backward compatibility.
    - Advanced purchasing opportunities for new product or end-of-life materials to ensure component availability.
    - Development and training of Dominion personnel for repair activity which includes analysis of component stocking levels for potential replacement inventory.
    - Implementation of Dominion Quality Standards at Georgia Elections sits in advance of product supply to ensure quality standards are met and don’t adversely affect supply.
    - A consistent and methodical review of supply lines for each product.
    - Audits, completed by Dominion personnel, on each production build to ensure outgoing quality levels comply to company’s standards.

KNOWiNK

KNOWiNK will keep stock of inventory to repair, replace or upgrade all non-electronic Poll Pad accessories throughout life of contract (payment may be required to repair/replace/upgrade certain items). Replacement of electronic hardware such as iPads, printers or wireless hotspots with identical models are subject to availability by manufacturer (payment may be required to repair/replace/upgrade certain items). Updates to software will be available throughout the life of the contract.

Certain accessories and consumables (e.g. iPad stands, stylus pens, cases, receipt paper) can be purchased separately from KNOWiNK, as long as these items work in conjunction and do not interfere with the operation of the Poll Pad software.

Throughout the life of the contract, all prices on additional software licenses and additional or upgraded equipment & accessories will be quoted by KNOWiNK before any purchase. KNOWiNK will strive to keep prices on all software, equipment & accessories reasonable and competitive within the electronic poll book industry.

Any service organization would need to be authorized by KNOWiNK to provide services in connection to the Poll Pad software; and KNOWiNK is the sole source provider of updates to the Poll Pad software.

Section 17 – Quality Assurance

File 17-1 Quality Assurance

17.1 All equipment must be presented to the GASOS for acceptance testing before distribution. All equipment that fails acceptance testing is prohibited from distribution and shall be returned to the Supplier, at Supplier cost. Describe your quality assurance plan to meet the above requirement to ensure that new and repaired equipment moves efficiently through GASOS acceptance testing.

Dominion

Dominion is proposing we establish an on-site Repair Depot inside the central facility. Once a unit fails Acceptance Testing by the GASOS, the unit will be sent to the repair area and a replacement unit put in its place. Once repaired the unit will be placed back in the population of units to be tested. Should it fail again or not be able to be repaired on-site, it will be replaced permanently.

Below we provide information detailing the multiple phases of logic and accuracy testing, including acceptance testing, Pre-Election testing, and Logic and Accuracy testing, including steps to segregate the testing results and re-zero the system in preparation of an actual election:

Acceptance Testing

Below we provide a general narrative and guidelines for user acceptance testing. At the close of this narrative, we have included a Sample Acceptance Test Workbook.

The State is responsible for User Acceptance Testing, and Dominion will provide an onsite presence to support acceptance testing performed by the State of Georgia. Acceptance testing involves a visual inspection of the voting platforms, successfully completing a series of internal diagnostics, and successfully tabulating ballots from a sample test election. Dominion provides documentation and training for client technicians, as well as warehouse set-up guidelines for inbound acceptance testing.

Preparation for Acceptance Testing

Dominion will provide guidelines and checklists to the State for acceptance testing and coordinate dates with the staff for software installation. This includes assessing suitability and identifying any modifications required, identifying areas for each process including a secure area for inventory control, preparing necessary acceptance documentation, and ensuring all necessary supplies are available.

Installation

Dominion will configure and install all software including the operating system and application software and set up the solution including all hardware and connections provided as part of the system.

Acceptance Testing

The State's Acceptance Team, with support from Dominion staff, will conduct detailed acceptance testing of the voting equipment. This acceptance testing provides assurance of full product functionality and accuracy. Acceptance testing is an essential part of the Dominion quality assurance process and takes place on-site at the customer location.

ImageCast X Voting terminals – System Acceptance Testing:

1. Physical inspection of equipment
2. Functional testing using provided test materials

ImageCast Precinct Voting Units – System Acceptance Testing:

1. Physical inspection of equipment
2. Functional testing using provided test materials

ImageCast Central – System Acceptance Testing:

1. Physical inspection of equipment
2. Functional testing using provided test materials

EMS Acceptance Testing:

1. Utilization of the EMS system to restore or create a simple election project
2. Creation of sample election files and ballots for in-person and ImageCast Central voting system
3. Directly load sample results from voting terminals
4. Create election Results Reports

Pre-Election Testing

Dominion's ImageCast polling place equipment can be prepared by elections staff at the warehouse to ensure that minimal system setup and configuration needs to be completed by poll workers at polling places/vote centers. The table below describes the basic functions that need to be performed by poll workers to prepare each piece of polling place equipment on-site for voting activities.

Equipment	***Set-up steps necessary***
ImageCast X (ICX) Ballot Marking Device	1. Plug voting terminal and printer into power supply 2. Attach Audio Tactile Interface (ATI) and headphones 3. Power on 4. Complete poll-worker authentication 5. Open polls
ImageCast Precinct (ICP) Tabulator	1. Plug tabulator into power supply 2. Attach the Audio Tactile Interface (ATI) 3. Power on / raise the monitor 4. Complete poll-worker authentication 5. Open polls
ImageCast (MBP) Mobile Ballot Production	1. Plug laptop and printer into power supply 2. Connect laptop to printer using USB cable 3. Power on 4. Complete Poll-worker authentication 5. Launch Printing application

ImageCast Central (ICC) Tabulator and G1130 and M160ii scanners	1. Ensure computer is powered up and that scanner is connected to ICC workstation via the USB cable. 2. Turn on scanner and wait for LCD to read "Read." 3. Turn on workstation and start up Microsoft Windows. 4. Start application from shortcut on the desktop. 5. Basic startup log message are displayed in application window. 6. Select desired tabulator list from window and continue. 7. Apply iButton security key when prompted. 8. Scan ballots

Logic and Accuracy Testing

GASOS officials and their staff will conduct Logic and Accuracy testing of voting equipment, using processes, procedures, and support and supervised by by Dominion. Dominion will be active in the process of unpacking, staging and removing units as testing is completed. The testing will involve such a high volume of work, we understand the GASOS staff may not be physically able to perform all the testing. The Dominion project team will be available throughout the L&A process available to assist on an as required basis. Training for Georgia officials on the L&A process will take place prior and during Logic and Accuracy testing.

Detailed Logic and Accuracy testing procedures following the testing done at the central Dominion facility will be standardized for the counties. The procedures presented in this RFP response are suggestions only, and the applicable laws and regulations of the jurisdiction must ultimately determine the specific test process to be followed. This testing should be performed prior to every election.

At the county level, once the system has been fully loaded with election data, and as soon as possible after receipt of the first set of official election ballots from the printer, the jurisdiction must conduct formal "Logic and Accuracy" testing in order to confirm that the system has been correctly configured, and that all components are functioning properly.

- Logic and Accuracy testing should include the same steps as if running a real election.
- If any vote discrepancies or errors are encountered during this process, the ballots and the procedure must be reviewed as human error is most likely the cause. Otherwise, the Administrator is informed immediately. Once the problem has been corrected, repeat the entire Logic and Accuracy testing procedure for the selected tabulator(s).
- If there are no errors or discrepancies, sign and date the forms certifying the Logic and Accuracy testing has been conducted successfully. These forms should be retained, along with the test decks, as part of the test documentation records for the election.
- Administrator must backup all results following the successful Logic and Accuracy test.

- Finally, each of the tabulators are re-zeroed and the results database is purged in order to delete the Logic and Accuracy results from the system prior to the actual election.

Once the Logic and Accuracy testing is complete and the system has been re-zeroed, all components of the system must be stored in a secure location until the election (or until the first early voting opportunity) in order to ensure that they cannot be accessed or tampered with.

Back-Up Procedures

Before resetting the system for Election Day, make sure that the EMS Administrator has backed up the results from the entire system. This includes the following:

1. A backup of the Election Project containing the results from the executed Logic and Accuracy System test. The project package created during this back up procedure must be manually copied and saved to a dedicated folder on the EMS server. Name this folder distinctly so it can be identified in the future.
2. A backup of the entire Adjudication folder from the D:\drive and databases on the EMS server.
3. A backup of all ImageCast Central election files containing results from the Logic and Accuracy test by moving the entire C:\ICC election Files folder to a safe place.
4. Election files to the C: drive of ImageCast Central workstations so that the system is ready for Election Day.

Purge and Re-Zero

Once testing is complete, the entire system must be purged of all test results prior to using for the election. The Election Administrator should ensure that the Logic and Accuracy test results are purged from the following locations:

1. Clear the number of marked ballots on ImageCast X
2. Purge the Results Tally and Reporting database
3. Ensure ImageCast central files are backed up and cleared, and a new copy of the master set of election files are deployed at that time.
4. The ICP will print a Zero Report that verifies no votes have been logged on the unit.

KNOWiNK

[redacted]

[redacted]

[redacted]

Section 18 – Documentation

File 18-1 TDP

18.1 Provide a complete technical data package (TDP) for the proposed SVS.

Note: Due to the limits placed on the size of the files that can be uploaded to the State’s procurement system, Dominions has broken out its TDP submission into the four sections – File 1 of 4, file 2 of 4, file 3 of 4 and file 4 of 4.

TDP File 1 of 4

Dominion is pleased to present the complete technical data package (TDP) for the proposed SVS, Democracy Suite, and its components.

Democracy Suite System

Democracy Suite System 5.5 Overview

PDF

2.02-DemocracySuiteSystemOverview-5.

Democracy Suite 5.5 Personnel Development and Training Requirements

PDF

2.10-DemocracySuitePersonnelDeploym

Section 18 – Documentation

File 18-1 TDP

18.1 Provide a complete technical data package (TDP) for the proposed SVS.

Note: Due to the limits placed on the size of the files that can be uploaded to the State's procurement system, Dominions has broken out its TDP submission into the four sections – File 1 of 4, file 2 of 4, file 3 of 4 and file 4 of 4.

TDP File 2 of 4

Dominion is pleased to present the complete technical data package (TDP) for the proposed SVS, Democracy Suite, and its components.

Democracy Suite Election Management System (EMS)

Democracy Suite 5.5 EMS Operation Procedures

2.08-EMSSystemOp
erationProcedures-5

Democracy Suite 5.5 EMS Maintenance Manual

2.09-EMSSystemMai
ntenanceManual-5.

Democracy Suite 5.5 EMS System Installation and Configuration

EMSSystemInstalland
Config-5.5r.pdf

ImageCast X

ImageCast X System Operations Procedures

2.08-ICXSystemOper
ationProcedures-5.5

ImageCast X System Maintenance Manual

2.09-ICXSystemMain
tenanceManual-5.5.

ImageCast X Installation and Configuration

ICX_InstallConfig_5.5.pdf

Section 18 – Documentation

File 18-1 TDP

18.1 Provide a complete technical data package (TDP) for the proposed SVS.

Note: Due to the limits placed on the size of the files that can be uploaded to the State's procurement system, Dominions has broken out its TDP submission into the four sections – File 1 of 4, file 2 of 4, file 3 of 4 and file 4 of 4.

TDP File 3 of 4

Dominion is pleased to present the complete technical data package (TDP) for the proposed SVS, Democracy Suite, and its components.

ImageCast Precinct

ImageCast Precinct System Operations Procedures

2.08-ICPSystemOper
ationProcedures-5.5r.

ImageCast Precinct Maintenance Manual

2.09-ICPSystemMain
tenanceManual-5.5.

ImageCast Central

ImageCast Central Operations Procedures

2.08-ICCSystemOpe
rationProcedures-5.

ImageCast Central Installation and Configuration

ICCInstallandConfi
g-5.5.pdf

ImageCast Adjudication

ImageCast Adjudication System Operations Procedures

2.08-ADJSystemOperationProcedures-5.

ImageCast Adjudication Maintenance Manual

2.09-ICPSystemMaintenanceManual-5.5.

Section 18 – Documentation

File 18-1 TDP

18.1 Provide a complete technical data package (TDP) for the proposed SVS.

[redacted]

File 18-2 System Map

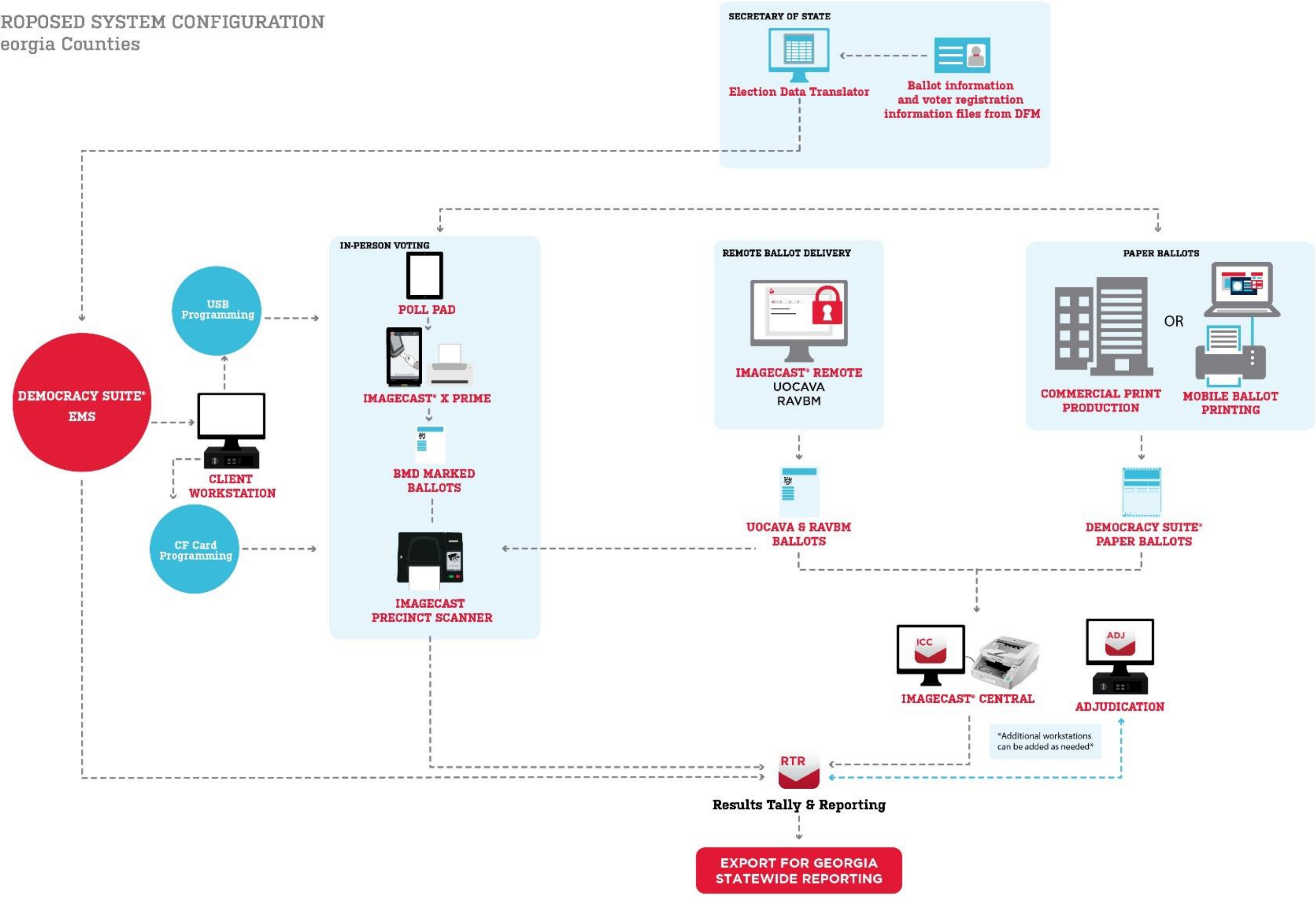
18.2 Provide a system map for the proposed SVS that explains how each component (EMS, EPDMS, PPS, CSD, BMD, etc.) creates the overall proposed SVS.

Dominion

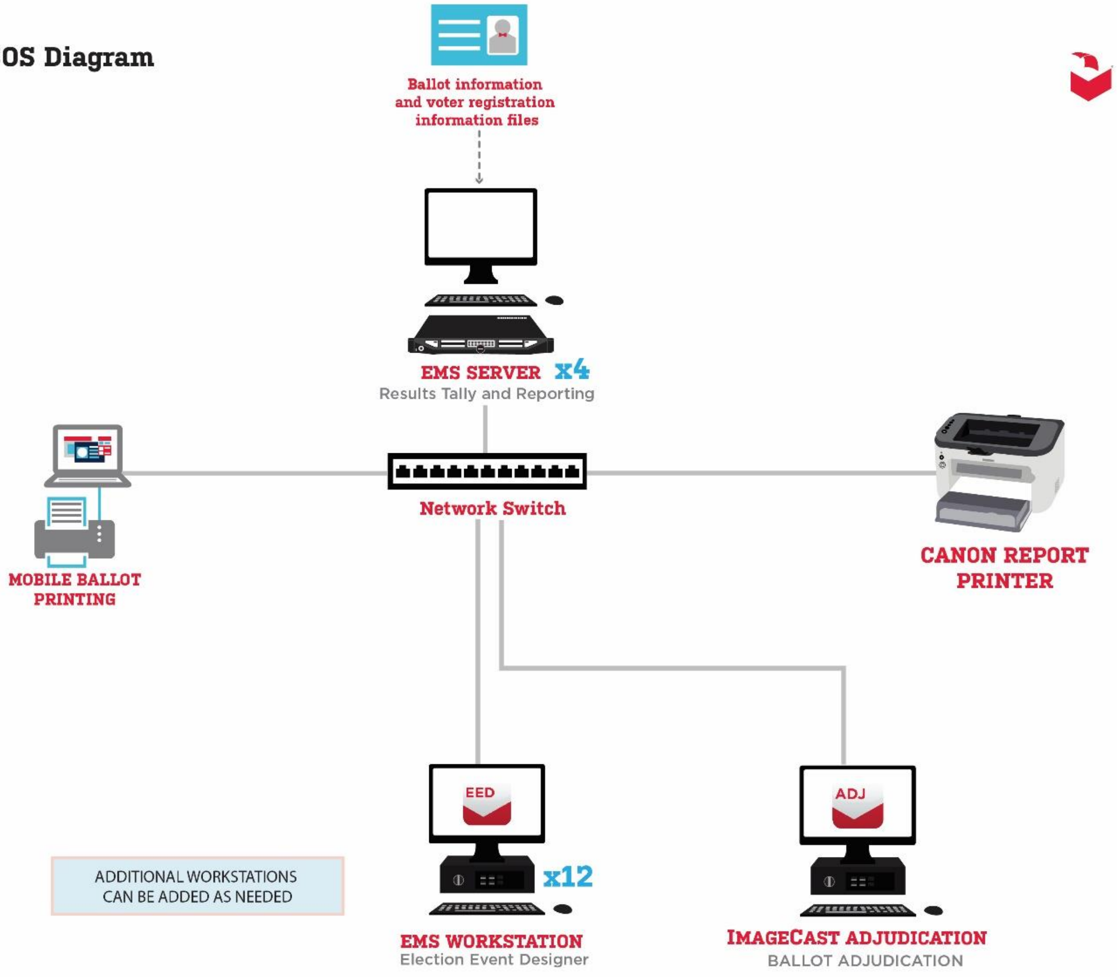
In following pages, Dominion has provided the State the following system map diagrams:

- Proposed System Configuration
- GASOS Diagram

PROPOSED SYSTEM CONFIGURATION
Georgia Counties



GASOS Diagram



[redacted]

Section 18 – Documentation

File 18-3 User Guides

18.3 Provide user guides and manuals for all components of the proposed SVS to the GASOS and to all county election offices.

Dominion

Dominion is pleased to present user guides and manuals for the proposed SVS, Democracy Suite 5.5, and its components.

Democracy Suite Election Management System (EMS) User Guides

Democracy Suite EMS Election Data Transfer User Guides

EMS_EDT_UserGuide-5.5.pdf

Democracy Suite EMS Election Event Designer User Guides

EMS_EED_UserGuide-5.5.pdf

Democracy Suite EMS Audio Studio User Guides

EMS_AS_UserGuide-5.5.pdf

Democracy Suite EMS Voter Activation User Guides

ICVA_UserGuide-5.5.pdf

Democracy Suite EMS Results Tally & Reporting User Guides

EMS_RTR_UserGuide-5.5.pdf

ImageCast X User Guide

ICX_UserGuide_5.5.pdf

ImageCast Precinct User Guide

ICP_UserGuide-5.5.
pdf

ImageCast Central User Guide

ICC_UserGuide-5.5.
pdf

ImageCast Adjudication User Guide

ADJ_UserGuide-5.5.
pdf

KNOWiNK

A sample Poll Pad with encoder user guide is embedded below. Detailed and customized Poll Pad and ePulse administrative guides will be provided to the state as part of this project.

18-3 User
Guides_Attachment

Section 18 – Documentation

File 18-4 Storage Guide

18.4 Provide storage guidelines for all components of the proposed SVS to the GASOS and to all county election offices.

Dominion

Below Dominion provides the component specifications and storage guidelines for each major component of the proposed solution.

ImageCast X Tablet
The ImageCast X has a small storage footprint, is lightweight and easy to deploy. Each ImageCast X Touchscreen Tablet from Avalue comes packaged in its original box with molded foam inserts for maximum protection. Each box weighs approximately 23 pounds and measures:

H = 26 inches
W = 16 inches
D = 11 inches

The ImageCast X units should not be stacked on top of one another for storage unless they are in their respective carrying cases or packaging boxes (Suggested Maximum Stack = 5 Boxes High)

- Storage Temperature min/max: -20°C ~ 60°C
- Operating and/Storage Conditions (Relative Humidity): From 0% ~ 90% RH noncondensing
- Pack the ImageCast X tablet into its provided packaging box with foam inserts to provide vibration and impact protection.

In order to obtain maximum battery life, periodic maintenance of the internal backup battery is important. It is therefore recommended that the internal back-up battery is charged for at least 12 hours every eight months when the unit is in power off mode/storage. It is equally important to ensure that the internal battery is fully charged before the unit is deployed on Election Day. The Battery Status is indicated using visual indicators once the ImageCast X is powered up.

To charge the battery, connect the unit to a standard 120V, 60Hz AC Power Supply and wait for the device to power up. Insert Technician Smart Card and enter the corresponding PIN. Once the Technician menu is available, select "Power off" and wait for the device to power down.

ImageCast X BMD printer

The ImageCast X's accompanying printer is manufactured by HP and comes in its original packaging with foam inserts for maximum protection. Each box weighs approximately 19 pounds and measures:

H = 18 inches
W = 17 inches
D = 11 inches

Printers should not be stacked on top of one another for storage unless they are in their respective carrying cases or packaging boxes (Suggested Maximum Stack = 5 Boxes High).

ImageCast Precinct

The ImageCast Evolution comes in a standard packaging including foam inserts for maximum protection. Each box weighs approximately 14 pounds and measures:

H = 3 inches
W = 17 inches
D = 13 inches

The accompanying ballot box, with the lid attached weighs approximately 85 pounds and measures:

H = 44 inches
W = 25 inches

D = 38 inches

The tabulators should not be stacked on top of one another for storage unless they are in their respective carrying cases or packaging boxes (Suggested Maximum Stack = 5 Boxes High). Alternatively, the ImageCast Evolution tabulators can be stored on the ballot box with the lid affixed and should not be stacked.

- Storage Temperature min/max: From -25°C - 60°C
- Operating and/Storage Conditions (Relative Humidity): From 20% - 80% RH non-condensing
- Place the tabulator inside the re-sealable bag into the provided packaging box with foam inserts to provide vibration and impact protection.
- Store the packaged tabulator box under conditions specified.
- Alternatively, leave the tabulator on the Ballot Box but place the Ballot Box dust cover over it to keep it free from environmental elements.
- Store the tabulator (and Ballot Box, if applicable) in a dust-free, clean environment.
- Perform periodic charging of the back-up battery module for 12 hours every 9 months.
- The tabulators should not be stacked on top of one another for storage unless they are in their respective carrying cases or packaging boxes (Suggested Maximum Stack
- = 4 Boxes High)

ImageCast Central

The ImageCast Central CPU is shipped with standard packaging from Dell with foam inserts for maximum protection. The box weighs approximately 18 pounds and measures:

H = 19 inches
W = 23.5 inches
D = 7.5 inches

CPUs should not be stacked on top of one another for storage unless they are in their respective carrying cases or packaging boxes (Suggested Maximum Stack = 5 Boxes High).

- Storage Temperature min/max: -40°C ~ 65°C
- Operating and/Storage Conditions (Relative Humidity): From 20% ~ 80% (non-condensing)
- Place the CPU and Scanner in packaging boxes with foam inserts to provide vibration and impact protection.
- Store the packaged CPU and Scanner boxes under conditions specified.
- Store the CPU and Scanner boxes in a dust-free, clean environment.
- The CPU and Scanner units should not be stacked on top of one another for storage unless they are in their respective carrying cases or packaging boxes (Suggested Maximum Stack = 5 Boxes high for CPU and 4 Boxes High for G1130 scanner)

InterScan HiPro Scanner

The devices of this type are delivered in specially made wooden crates. Transport without a corresponding transport box is not recommended, as this may cause damage to the device. Shipping includes 2 boxes with a combined weight of 1,250 lbs. measuring:

Box 1

H = 49 inches

W = 39 inches

D = 62 inches

Box 2

H = 49 inches

W = 39 inches

D = 32 inches

ImageCast Central G1130 Scanner

The Canon G1130 is easily scalable to meet the needs of most jurisdictions. The G1130 is shipped with standard packing from Canon with foam inserts for maximum protection. Each box weighs approximately 52 pounds and measures:

H = 16.5 inches
W = 25.5 inches
D = 23 inches

Scanners should not be stacked on top of one another for storage unless they are in their respective carrying cases or packaging boxes (Suggested Maximum Stack = 4 Boxes High).

Mobile Ballot Printing

All mobile ballot printers are transported in their original packaging. Their dimensions are:

- OKIDATA C712DN
    - Dimensions(WxDxH) 17.1“ x 23.8“ x 15.3“ (435 x 604 x 389 mm)
    - Weight(includes supplies) Approx. 68.3 lb. (31.0 kg)
- OKIDATA C931e
    - Dimensions(WxDxH) 27.5“ x 24.6“ x 25.2“ (699 x 625 x 640 mm)
    - Weight(includes supplies) Approx. 216.1 lb. (98.0 kg)
- OKIDATA C332DN
    - Dimensions(WxDxH) 16.1“ x 19.8“ x 9.5“ (410 x 504 x 242 mm)
    - Weight(includes supplies) Approx. 48.5 lb. (22.0 kg)

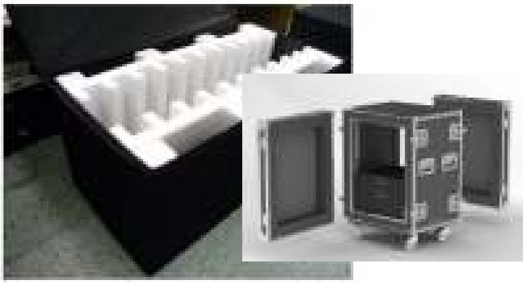
The Mobile Ballot Printing solution consists of a compact laptop and OKIDATA printer. These devices can be easily transported in a delivery vehicle or car. The OKIDATA printers should be transported in their original packaging. This will prevent moisture and dust from affecting the electronic components of the election machinery and protect it from scratches, dents or damage. The packaging also includes foam inserts for impact protection.

Alternative Storage Solutions

Dominion can offer a range of customized storage and transportation solutions based on our experience with large entities such as the City of Chicago, Clark County Nevada, the State of Louisiana, and many other entities. Detailed footprints will vary based on your needs and may include:

For large precincts, the below rolling unit can hold 10 ImageCast X voting units, along with their accompanying printers, offering an efficient use of space for both transportation and storage. In Clark County, NV this customized storage and delivery option provided for a nearly 50% decrease in both storage and transportation costs alone.

Additionally, we can offer a soft sided bag that holds 10 ImageCast X tablets.



The example to right is for medium sized precincts holds 4 ImageCast X units and their printers on four sturdy casters with a front door providing for easy access to the voting units. The side handles provide for easy movement and also provide points to secure the units in transport.

Other options for precincts requiring fewer voting units are pelican cases or rolling cases that can be used to transport 2 ImageCast X voting devices and printers. The varying sizes of available pelican cases and rolling bags can also be configured allow for customizable foam inserts that can accommodate associated hardware such as the ImageCast Central, scanners, activation stations, and other materials.

Two unit ImageCast X Bag

Single Unit ImageCast X Printer Bag

There are numerous other transportation cases and carts in a variety of configurations available on the commercial market. For example, working with the City of Chicago, Dominion developed a fully customized all-in-one Election Supply Carrier that will hold multiple voting units, supplies, and everything needed to set up operations in individual precincts. We would look to work with the State to create a fully customizable and scalable solution to meet your transportation and storage needs.

KNOWiNK

Poll Pad Handling and Storage

Handling – Do not expose product to excessive physical shock or vibration. Do not disassemble. Should an individual battery in the product become ruptured, do not allow contact with water. Apple Product Information Sheet Storage – Store in a cool, well ventilated area. Storage above 100 degrees can result in loss of product performance, leakage, or rust. Do not expose product to open flame or liquids.

Thermal Printer Paper

KNOWiNK is proposing no consumables to support the Poll Pad electronic poll book. The only potential consumable is thermal printer paper for the optional thermal Bluetooth printers.

Thermal paper of the 4.48 gram economy grades are rated for five to seven years life under proper storage. Proper storage would be out of UV light, heat, moisture and high humidity. Any light in general is an enemy of thermal paper. Dark storage areas are best. Relative Humidity desired at 55-65%, and the temperature should be below 77 degrees.

Section 18 – Documentation

File 18-5 County Train Sample

18.5 Provide a sample of county election official training documentation to the GASOS on the basic setup and use of all components of the proposed SVS.

Dominion

Dominion offers a library of documentation specific to individual roles and situations. Acceptance Check Lists, Unit Tracking Procedures, and Troubleshooting Guides are examples of items used in Preventative Maintenance and Hardware Acceptance Training. User Guides and Quick Reference Guides are examples of items used in Election Poll Worker Training. User Guides are comprehensive textual documents, covering all facets of a topic such as Vote Tabulators and Accessible Components. Quick Reference Guides are brief, focused and image-oriented; they are designed for reference-at-a-glance in practical election situations.

Dominion is pleased to present the following samples of county election official training documentation, that provides basic setup of county-oriented components of the proposed SVS, Democracy Suite 5.5, and its components. (Please see Dominion's response to *18-6 PW Train Sample*, which contains system training documentation that may apply to some county elections officials.)

<u>Democracy Suite Accumulation Elections Official Guide Sample</u>

DSuite Accumulation
Election Official Guide

<u>ImageCast Central Elections Official Quick Reference Guide Sample</u>

ICC Election Official
Quick Reference Guid

<u>ImageCast X Quick Reference Guide Sample</u>

ICX Quick Reference
Guide Sample.pdf

<u>ImageCast X Card Management Quick Reference Guide Sample</u>

ICX Card
Management Quick R

<u>ImageCast Precinct Quick Reference Guide Sample</u>

ICP Quick Reference
Guide Sample.pdf

TRAINING VIDEO LINKS

o Election Event Designer – User Procedures: https://youtu.be/0cB9XBWfHqE

o ImageCast Central – User Procedures: https://youtu.be/3ENHzmFdMHU

o ImageCast Voter Activation – User Procedures: https://youtu.be/rhtIzWdR-do

o Results Tally & Reporting – Election Night Reports: https://youtu.be/QIlRBuaungM

o Results Transfer Manager – User Procedures: https://youtu.be/W2BjQMcaGuY

o Results Tally & Reporting – User Procedures: https://youtu.be/ghL5rBrygpA

o ImageCast X - https://www.youtube.com/playlist?list=PLsiDPMsLSeoDf3IgQnJX5oT-MecOochnH

KNOWiNK

Sample training guides used for GASOS, county election official, and poll worker training are provided in 18-1 TDP and 18-3 User Guides.

Section 18 – Documentation

File 18-6 PW Train Sample

18.6 Provide a sample of poll worker training documentation to all counties on the basic setup and use of the proposed BMD, PPS, and EPoll solutions.

Dominion

Dominion offers a library of documentation specific to individual roles and situations. Acceptance Check Lists, Unit Tracking Procedures, and Troubleshooting Guides are examples of items used in Preventative Maintenance and Hardware Acceptance Training. User Guides and Quick Reference Guides are examples of items used in Election Poll Worker Training. User Guides are comprehensive textual documents, covering all facets of a topic such as Vote Tabulators and Accessible Components. Quick Reference Guides are brief, focused and image-oriented; they are designed for reference-at-a-glance in practical election situations.

Dominion is pleased to present the following samples of poll worker training documentation, that provides the basic setup of all components of the proposed SVS, Democracy Suite 5.5, and its components.

ImageCast X Poll Worker Guide Sample

ICX Poll Worker
Guide Sample.pdf

ImageCast X Poll Worker Quick Reference Guide Sample

ICX Poll Worker
Quick Reference Guid

ImageCast X Card Management Poll Worker Quick Reference Guide Sample

ICX Card
Management Poll Wo

ImageCast Precinct Poll Worker Guide Sample

ICP Poll Worker
Guide Sample.pdf

ImageCast Precinct Poll Worker Quick Reference Guide Sample

ICP Poll Worker
Quick Refernce Guide

TRAINING VIDEO LINKS

o Election Event Designer – User Procedures: https://youtu.be/0cB9XBWfHqE

o ImageCast Central – User Procedures: https://youtu.be/3ENHzmFdMHU

o ImageCast Voter Activation – User Procedures: https://youtu.be/rhtIzWdR-do

o Results Tally & Reporting – Election Night Reports: https://youtu.be/QIlRBuaungM

o Results Transfer Manager – User Procedures: https://youtu.be/W2BjQMcaGuY

o Results Tally & Reporting – User Procedures: https://youtu.be/ghL5rBrygpA

o ImageCast X - https://www.youtube.com/playlist?list=PLsiDPMsLSeoDf3IgQnJX5oT-MecOochnH

KNOWiNK

Sample training guides used for GASOS, county election official, and poll worker training are provided in 18-1 TDP and 18-3 User Guides.

Section 18 – Documentation

File 18-7 Voter Info Sample

18.7 Provide a sample of voter instructional information on the use of the proposed BMD and PPS solutions.

Dominion

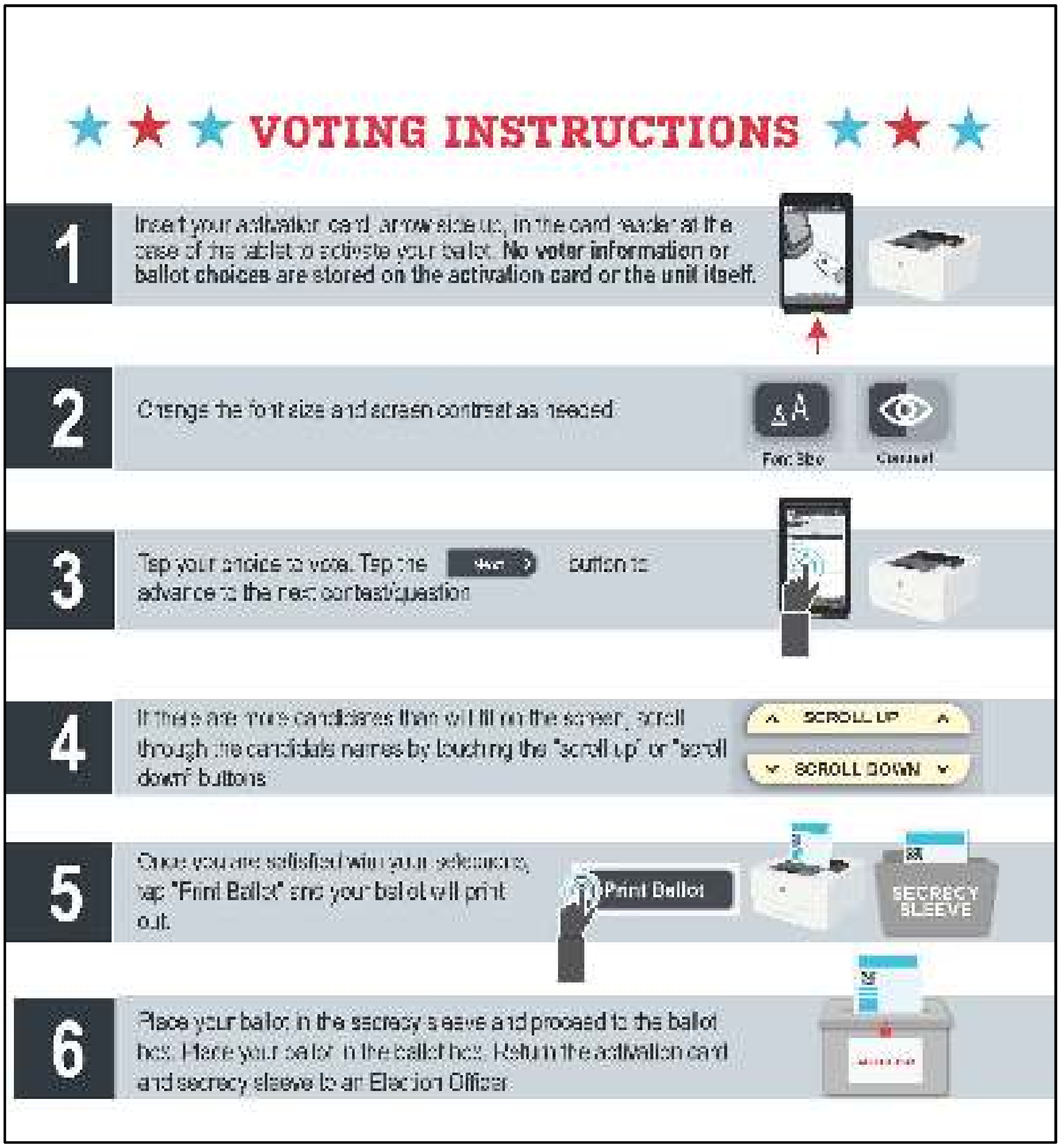
Dominion is capable of producing a wide array of voter outreach materials regarding the new voting system. We have experience working with several large jurisdictions to produce customized marketing materials for the benefit of voters and the general public. Materials can be customized to include posters, flyers, animations, videos. We look forward to working with the State to customize a package that addresses any items you feel would benefit the citizens of Georgia.

Below we provide several samples of voter outreach materials. Sample materials include an animation of the voting process, which was translated into 5 languages for a large jurisdiction, in-booth instructions, and general information to familiarize voters to the new system including the functionality of the ImageCast X, the look and feel of the ImageCast X ballot, and

Sample How to Vote on an ImageCast X animation:

https://youtu.be/R5mXZiwDxsg

Voting Instructions Poster



★ ★ ★ VOTING INSTRUCTIONS ★ ★ ★

1. Insert your activation card, arrow side up, in the card reader at the base of the tablet to activate your ballot. **No voter information or ballot choices are stored on the activation card or the unit itself.**

2. Change the font size and screen contrast as needed.

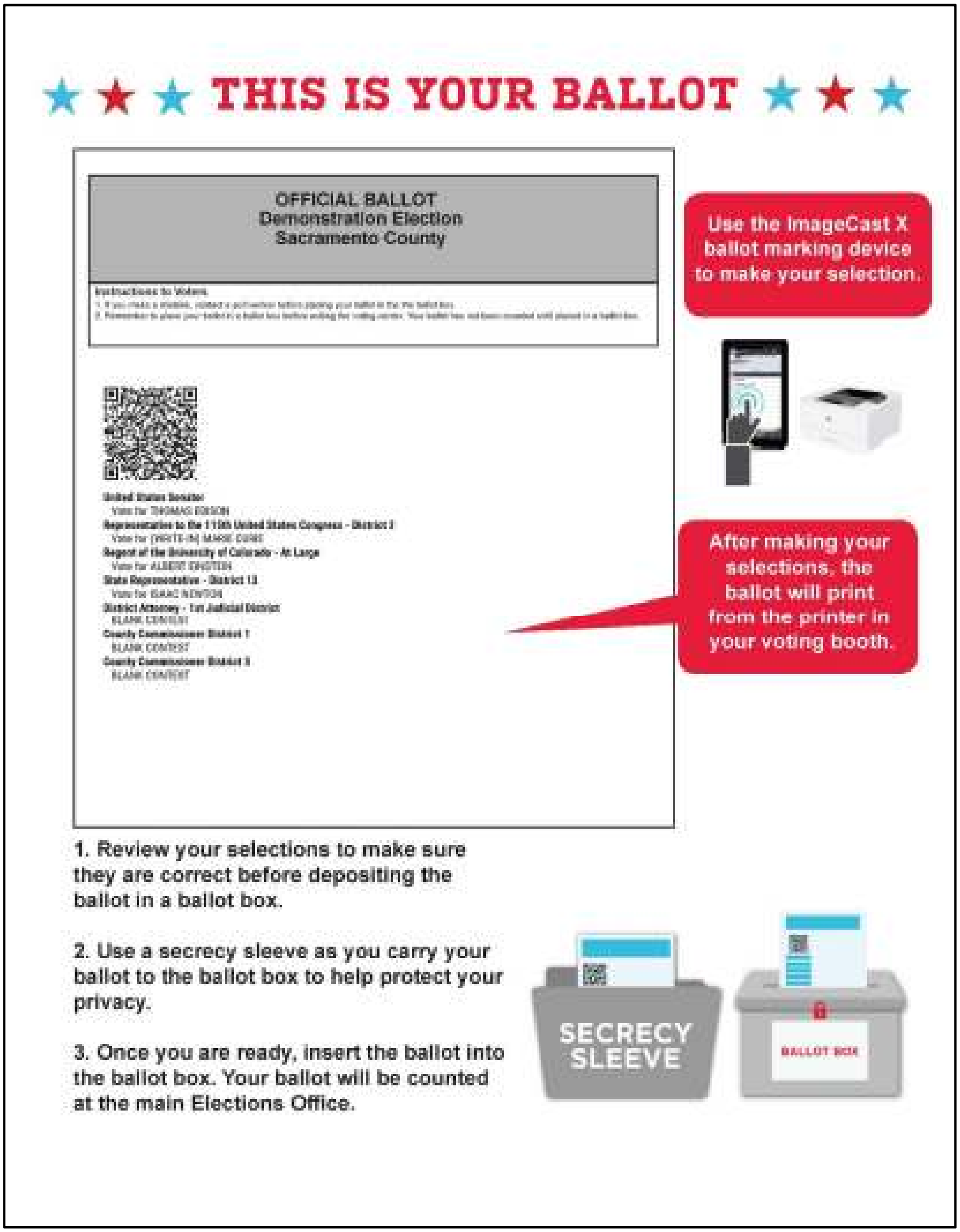
3. Tap your choice to vote. Tap the Next button to advance to the next contest/question.

4. If there are more candidates than will fit on the screen, scroll through the candidate names by touching the "scroll up" or "scroll down" buttons.

5. Once you are satisfied with your selections, tap "Print Ballot" and your ballot will print out.

6. Place your ballot in the secrecy sleeve and proceed to the ballot box. Place your ballot in the ballot box. Return the activation card and secrecy sleeve to an Election Officer.

This is Your Ballot Poster



THIS IS YOUR BALLOT

OFFICIAL BALLOT
Demonstration Election
Sacramento County

Instructions to Voters

United States Senator
Vote for THOMAS EDISON
Representative to the 115th United States Congress - District 2
Vote for [WRITE-IN] MARIE CURIE
Regent of the University of Colorado - At Large
Vote for ALBERT EINSTEIN
State Representative - District 13
Vote for ISAAC NEWTON
District Attorney - 1st Judicial District
BLANK CONTEST
County Commissioner District 1
BLANK CONTEST
County Commissioner District 3
BLANK CONTEST

Use the ImageCast X ballot marking device to make your selection.

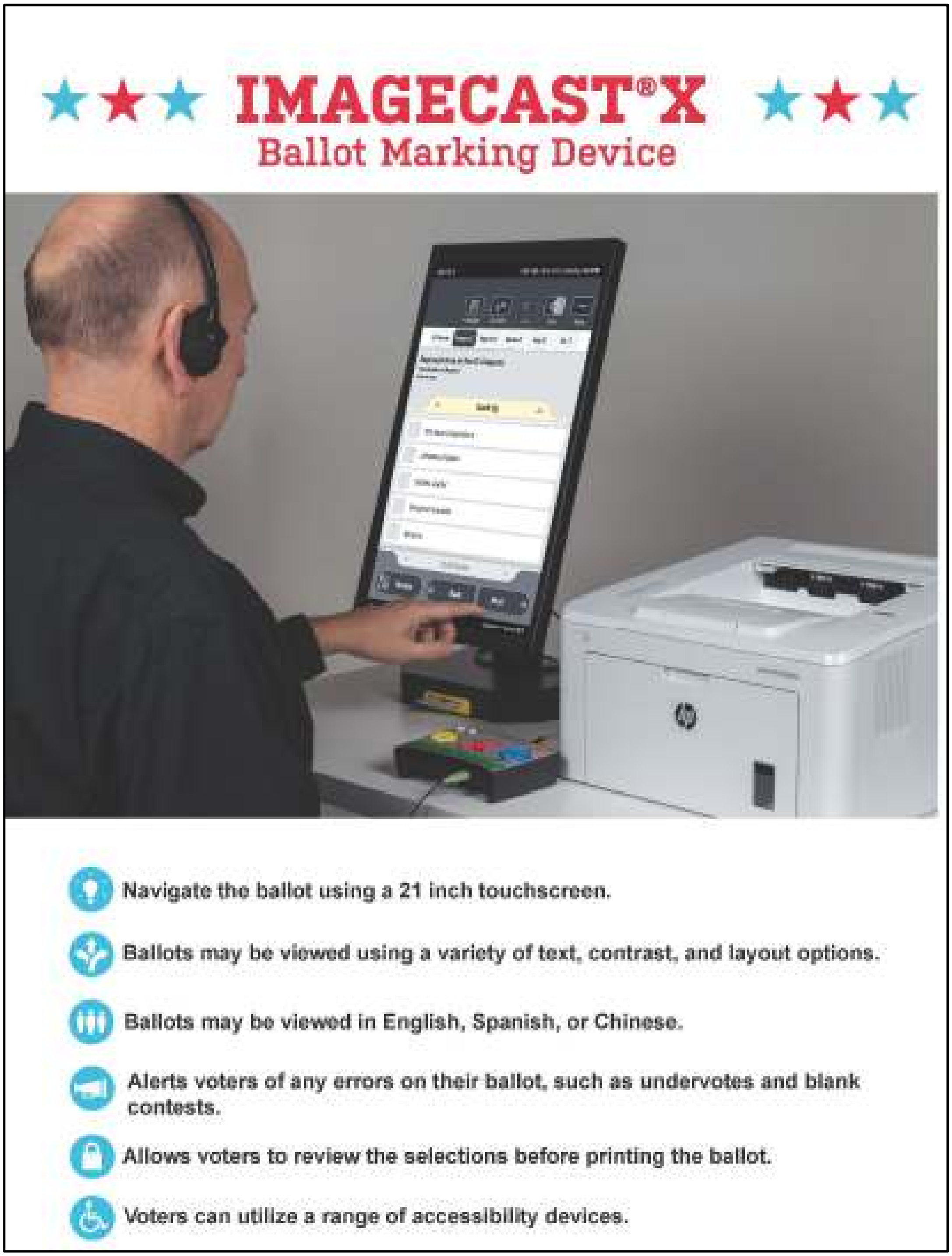
After making your selections, the ballot will print from the printer in your voting booth.

1. Review your selections to make sure they are correct before depositing the ballot in a ballot box.

2. Use a secrecy sleeve as you carry your ballot to the ballot box to help protect your privacy.

3. Once you are ready, insert the ballot into the ballot box. Your ballot will be counted at the main Elections Office.

ImageCast X Ballot Marking Device Poster



★★★ IMAGECAST®X ★★★

Ballot Marking Device

- Navigate the ballot using a 21 inch touchscreen.
- Ballots may be viewed using a variety of text, contrast, and layout options.
- Ballots may be viewed in English, Spanish, or Chinese.
- Alerts voters of any errors on their ballot, such as undervotes and blank contests.
- Allows voters to review the selections before printing the ballot.
- Voters can utilize a range of accessibility devices.

Section 19 – New Technology

File 19-1 New Tech

19.1 During the term of the Contract, the GASOS may wish to incorporate new components or technologies within the scope of the proposed SVS, which at the time of the Contract's start date were unavailable. Describe how you would manage this process.

Dominion

Dominion is undoubtedly the most active vendor in the development and certification arena. We will continue to listen to our customers, build upon our experiences and enhance our products accordingly. Since 2013, Dominion has ranked first in the most rigorous state-level independent testing and evaluation processes. Examples include:

In 2013, the State of New Mexico evaluated the two major voting system vendors in the United States, and Dominion was ranked the highest in the State evaluation.

In 2014, Dominion became the first vendor to be certified to the VVSG 2005 standards in the State of California, the only such vendor certified since 2008. Dominion continues to expand our customer base throughout California through contract awards and new implementations and in the November 2018 Gubernatorial election, we will work with have 18 counties utilizing Democracy Suite.

In 2015, the State of Colorado evaluated four different voting systems piloting elections, and Dominion ranked the highest in this independent evaluation. Eighteen Colorado counties successfully made the transition to Democracy Suite in 2016 for both the Primary and General elections. In 2016, an additional 40 Colorado counties have transitioned to Democracy Suite.

In 2017, Dominion received the highest score out of five major voting system vendors by the State of Michigan Joint Evaluation Committee for their statewide RFP. Since the statewide evaluation, 59 Michigan counties have contracted with Dominion to make the transition to Democracy Suite in 2017 and 2018. Dominion has consistently outperformed all other voting system manufacturers in these major statewide evaluations.

In 2014, Clark County and Washoe County, NV transitioned to the Democracy Suite system. and are currently installing the latest in Elections Innovation – the ImageCast X with Voter Verified Paper Audit Trail (VVPAT) throughout the state.

Dominion is dedicated to continued research and development as the culture of the election industry is rapidly changing and adding new challenges to voting systems nationwide. It is this commitment Dominion makes to their customers and perspective customers that sets us apart from the other voting system manufacturers. We are in EAC certification and testing annually with enhancements, incorporating changes customers ask for and to insure our products' path is always looking forward.

Dominion is working with the Voting System Test Laboratories (VSTL), to incorporate additional features as part of an update to our currently certified EAC 5.5 system. As part of this EAC update, Dominion will provide its current customer base the option to either use barcode technology with its current benefits or print a full ballot without changing the hardware that is being provided as part of this opportunity. Dominion will discuss this functionality during the product demonstration phase as well as additional enhancements that are scheduled as part of our updated release.

KNOWiNK

From customizing the application to the implementation of new election technology and hardware, KNOWiNK will meet with the GASOS to determine what technology or components need to be added. Based on the complexity of the additions and the to-be-determined contract start date, a revised project plan may be made. KNOWiNK's implementation project manager will be the main point of contact and oversee this process for the GASOS.

Section 19 – New Technology

File 19-2 Add Component

19.2 Supplier may request to add additional types of SVS components throughout the term of the Contract. Describe how you would manage this process. (i.e., introduction of a new model of equipment because of end of life of a component).

Dominion

Any software changes, upgrades, modifications, updates, patches, etc. are typically included in upcoming full releases of the software. Customers will have ongoing visibility as to which future version of Democracy Suite will include any Georgia - specific changes. Once the version is federally certified, in conjunction with the State certification, Dominion will devise an upgrade plan for customers.

Dominion is constantly working with Commercial off the Shelf equipment providers, such as Canon and Dell, to ensure visibility regarding end-of-life components and available replacements. This is done in conjunction with managing ongoing state and federal certification campaigns, to ensure that Democracy Suite remains fully operational and available to customers. Where possible Dominion strives to integrate any new product offerings and enhancements to the currently certified system version to prevent having to replace certain infrastructure components. However, major upgrades often require the upgrade of Dell/Microsoft related equipment and software which would be offered at current market value.

Dominion understands that election officials need to ensure that the significant investment required to upgrade a voting system is made with confidence and peace of mind that the technology will keep up with changing requirements and public expectations. Dominion's development team is continually working on refining existing products and functionality, leading to annual VVSG 2005 certification campaigns with the EAC, as well as state certifications where required.

The introduction of new products or enhancements will be communicated with Georgia as to their applicability to the system and discuss benefits associated with the proposed changes.

Please refer to 19.1 for discussion of new developments being made available to Georgia during the warranty period.

KNOWiNK

From customizing the application to the implementation of new election technology and hardware, KNOWiNK will meet with the GASOS to determine what technology or components need to be added. Based on the complexity of the additions to the scope of work, a new project plan may be created. KNOWiNK's implementation project manager will be the main point of contact and oversee this process for the GASOS.

Section 20 – Ballot Printing

File 20-1 BOD

20.1 Describe your ballot-on-demand solution.

Dominion's ballot on demand functionality, Mobile Ballot Printing, is fully certified. The system easily print ballots whenever and wherever needed with Dominion's Mobile Ballot Printing module. It is fully integrated with Democracy Suite, the Mobile Ballot Printing module allows jurisdictions to provide "Vote Anywhere" or internal printing of Absentee in a cost- effective and flexible way.

The Mobile Ballot Printing module has a user-friendly interface that presents clear information about ballots available to print, and features audit reports to track how many times each ballot style has been printed. Democracy Suite ballots have interfaced with a variety of on-demand ballot printing solutions, and Dominion is willing to work with the State's current printers to provide this service to the jurisdictions. Should a county select a third party solution, the vendor follows a Dominion ballots are subject to a printing qualification process conducted by Dominion for quality assurance.

Using EDT (Election Data Translator), all data elements needed to create the ballot are imported into the Election Event Designer application of Democracy Suite, where ballots for all voting channels are created out of a single database, including the Ballot on Demand system.

The ballot for Mobile Ballot Printing is generated out of Democracy suite with all appropriate watermarks and color. Security of the ballot images is handled during the election definition phase. Approved ballots are copied to the Mobile Ballot Printing laptops by using USB Memory sticks.

The Mobile Ballot Printing solution is able to issue paper ballots on-demand, allowing Vote Center staff if a Vote Center approach is permitted, the ability to search for the correct ballot by multiple parameters, precinct/split, language, ballot style, which allows them to be sure they get the correct ballot for the voter.

The Mobile Ballot Printing module has a user-friendly interface that presents clear information about ballots available to print, and features audit reports to track how many times each ballot style has been printed.

The process to use the Mobile Ballot Printing solution is fast and easy to use for Vote Center staff. The steps below are required to operate the system:

1. Log into Windows 10
2. Open MBP software
3. Select Election Project
4. Connect Printer
5. Turn Printer On
6. Select Ballot to print

Ballots are available within a few seconds and can be placed in a pending queue and viewed on the Pending for printing tab you can see a list of pending requests. Pending request contains information about file load time, ballot style (PDF file name), precinct Id (precinct external Id - optional). The user can start or stop request files handling by clicking Start or Stop buttons. Additionally, an Auto Print option is available that will immediately send the jobs to the printer without managing requests.

Each MBP system is composed of:

- DELL LATITUDE E3480 (1366 X 768) , 4GB RAM, 500GB HDD, WIN 10 PRO

The Mobile Ballot Printing solution is certified for use with several printers but the OKIDATA C712DN is proposed for Georgia and details regarding dimensions, power consumption, operating and storage environment are detailed below:

- OKIDATA C712DN
    - Speed: Letter 35 ppm color, 37 ppm mono
    - Print Resolution: 600 x 600 dpi
    - Additional tray to hold and duplex up to 19" ballots
    - The OKIDATA printers feature a long lifecycle recommended Duty Cycle of 1,500 to 6,000 pages per day with the maximum Daily Duty Cycle approaching 100,000 printed pages per month.

Section 20 – Ballot Printing

File 20-2 Abs Mail

20.2 Describe your ballot printing solution for Absentee by Mail voting.

As detailed in response to file 20-1, Dominion's ballot on demand functionality, Mobile Ballot Printing, is fully certified. The system easily print ballots whenever and wherever needed with Dominion's Mobile Ballot Printing module. It is fully integrated with Democracy Suite, the Mobile Ballot Printing module allows jurisdictions to provide "Vote Anywhere" or internal printing of Absentee in a cost- effective and flexible way.

The Mobile Ballot Printing module has a user-friendly interface that presents clear information about ballots available to print, and features audit reports to track how many times each ballot style has been printed. Democracy Suite ballots have interfaced with a variety of on-demand ballot printing solutions, and Dominion is willing to work with the State's current printers to provide this service to the jurisdictions. Should a county select a third party solution, the vendor follows a Dominion ballots are subject to a printing qualification process conducted by Dominion for quality assurance.

Using EDT (Election Data Translator), all data elements needed to create the ballot are imported into the Election Event Designer application of Democracy Suite, where ballots for all voting channels are created out of a single database, including the Ballot on Demand system.

The ballot for Mobile Ballot Printing is generated out of Democracy suite with all appropriate watermarks and color. Security of the ballot images is handled during the election definition phase. Approved ballots are copied to the Mobile Ballot Printing laptops by using USB Memory sticks.

The Mobile Ballot Printing solution is able to issue paper ballots on-demand, allowing and print absentee ballots in house and to search for the correct ballot by multiple parameters, precinct/split, language, ballot style, ensuring the correct ballot for the voter.

The Mobile Ballot Printing module has a user-friendly interface that presents clear information about ballots available to print, and features audit reports to track how many times each ballot style has been printed.

The process to use the Mobile Ballot Printing solution is fast and easy to use for elections staff. The steps below are required to operate the system:

1. Log into Windows 10
2. Open MBP software
3. Select Election Project
4. Connect Printer
5. Turn Printer On
6. Select Ballot to print

Ballots are available within a few seconds and can be placed in a pending queue and viewed on the Pending for printing tab you can see a list of pending requests. Pending request contains information about file load time, ballot style (PDF file name), precinct Id (precinct external Id - optional). The user can start or stop request files handling by clicking Start or Stop buttons. Additionally, an Auto Print option is available that will immediately send the jobs to the printer without managing requests.

Each MBP system is composed of:

- DELL LATITUDE E3480 (1366 X 768) , 4GB RAM, 500GB HDD, WIN 10 PRO

The Mobile Ballot Printing solution is certified for use with several printers but the OKIDATA C712DN is proposed for Georgia and details regarding dimensions, power consumption, operating and storage environment are detailed below:

- OKIDATA C712DN
  - Speed: Letter 35 ppm color, 37 ppm mono
  - Print Resolution: 600 x 600 dpi
  - Additional tray to hold and duplex up to 19” ballots
  - The OKIDATA printers feature a long lifecycle recommended Duty Cycle of 1,500 to 6,000 pages per day with the maximum Daily Duty Cycle approaching 100,000 printed pages per month.

All voting channels – including absentee ballot printing and process - are supported and powered by Democracy Suite. Most central count solutions that exist in the market today are large, expensive, proprietary solutions that are not scalable, efficient, or easy to use or maintain. Dominion ImageCast Central is engineered to efficiently and reliably process large volumes of mail-in absentee ballots.

ImageCast Central

ImageCast Central is designed to simply run ballots until there are none left. The system is extremely scalable; an additional ImageCast Central unit consists of a computer, software, and a scanner. The ImageCast Central is designed to scale based on the largest number of ballots a jurisdiction receives in one day. The sophisticated software evaluates the ballot image. If there is an outstack condition with a ballot, the system sends the image to Adjudication, where human eyes review any issue. The ImageCast Central is an efficient, robust and scalable solution that will meet the needs of the State at a fraction of the cost of proprietary scanners.

Programming the ImageCast Central

Central scanning is typically used to process absentee or mail-in ballots. The election definition is taken from EMS, using the same database that is utilized to program any precinct scanners for a given election. Multiple ImageCast Central scanners can be programmed for use in an election. The ImageCast Central application is installed and later initialized on a computer attached to the central count scanner. Ballots are processed through the central scanner(s) in batches based on jurisdictional preferences and requirements.

Results from the ImageCast Central

The ImageCast Central stores ballot images by scanned batches. The scanned ballot images are migrated to the Election Management System through computer networking or removable media. As with results data from any precinct scanners in use for an election, Results Tally and Reporting is the portion of EMS that processes the images to provide tabulation and operational reports to the jurisdiction.

Batches can be appended, deleted, and processed in a number of ways to suit typical election workflows, intake of ballots before, during, and after Election Day, jurisdictional requirements surrounding absentee ballot tabulation, and canvassing needs. The ImageCast Central also features all of the technological advances present in the precinct-level tabulators – the AuditMark and the Dual Threshold technology.

Early In-Person Absentee Voting with ImageCast X

The ImageCast X Ballot Marking Device can support different voting models, including early voting. As voters and election officials increasingly look to improve the voting process, Dominion listened and designed a touchscreen, in-person Ballot Marking Device, The ImageCast X combine flexibility and efficiency, with simplicity of modern technology. Dominions proposed SVS, Democracy Suite, is well-suited to accommodate the State's three week early voting offering.

Absentee in-person early voting would be conducted solely with the proposed ballot-marking device, ImageCast X. Completed ballots would then be scanned by then be scanned by ImageCast Precinct scanners and deposited into a secure ballot box.

Section 21 – System Data, Security, and Access

File 21-1 Cyber

21.1 Describe how data is imported into the proposed SVS and how data is exported out. Describe how this process is protected against a cyber attack.

Dominion

All Dominion voting system products undergo rigorous testing as part of the U.S. Federal Government Election Assistance Commission (EAC) certification testing, which includes strict testing against the latest VVSG (Voluntary Voting System Guidelines), including the stringent security provisions. All data that is imported into SVS, and exported out, is encrypted and abides by all EAC and NIST guidelines.

All of our equipment has been specifically designed to ensure the highest levels of security, for example:

Data generated by the Democracy Suite platform is protected by the deployment of FIPS-approved symmetric AES and asymmetric RSA encryption. The Democracy Suite EMS uses these techniques to encrypt election files prior to their use on ImageCast Precinct tabulators. Once the polls have been closed, the ImageCast Precinct tabulators encrypt all of the results files prior to transmitting them back to EMS. SHA-256 hashes are used for all data integrity and verification. Should an intrusive process or altering of any file occur, hash values will be, in turn, altered as well. With that said, any presence of an intrusive process will be detected, as the hashes of any altered data will not match the value initially determined.

Dominion is vigilant in its defense against cyber-attacks and malicious activity. From the quantitative risk assessment point of view, possible threats to the system have been analyzed and its vulnerabilities have been minimized by implementing a variety of countermeasures such as deterrent, preventive, corrective and detective controls:

- Deterrent controls reduce the likelihood of a deliberate attack.
- Preventative controls protect vulnerabilities and make an attack unsuccessful or reduce its impact.
- Corrective controls reduce the effect of an attack.
- Detective controls discover attacks and trigger preventative or corrective controls.

Before providing threat and vulnerability registers of the Democracy Suite platform, it is important to note some of the deployment environment characteristics.

Most installations of the Democracy Suite EMS platform are deployed in a private local system with no access to public network connections and, in some cases, without local network access. Deployment environment characteristics are as follows:

- The Democracy Suite EMS platform is deployed as a private local system. No public network connections are allowed or needed. The EMS platform can be deployed even without local network access, executing all of its components from the single physical hardware device.

- The Democracy Suite EMS platform implements multi-level access control mechanisms based on roles and permissions. Only authenticated and authorized personnel can access and use the system. Implementing proper security procedures and policies within the election organization is outside of Dominion Voting Systems control.
- The Democracy Suite EMS platform uses Self Encrypted Drives as data storage with real time hardware based encryption
- All data in rest or transport are digitally signed and encrypted using NIST approved algorithms (SHA256 and AES256)
- All systems during process of installation follow strict hardening procedures based on the latest vulnerability risks and include regular vulnerability tests with Nessus tool.
- Adjudication is deployed on the EMS client computers, and communicates only with EMS through the use of a closed network.

The system records all system access by individual unique identifiers including IP addresses, which are monitored for suspicious activity.

During the voting period, the system is constantly monitored to ensure that the system is always fully functional and available. Dominion also monitors for activity that could be deemed suspicious or harmful to the security of the system. As part of the project management plan, processes for monitoring, escalation and reporting will be implemented.

Dominion has security controls in place to mitigate possible denial of service (DoS) attacks on the voting infrastructure. Dominion has taken a number of initiatives in order to mitigate the risk of this type of attack, including:

- Automated failover in the case of a slowdown due to a deliberate attempt to disrupt the voting.
- Service level agreements with the data center provider that include “upstream” monitoring of network traffic in order to detect an attempted DoS attack.
- Production servers are located in redundant data center environments. These separate data centers employ multiple redundant power supplies including backup generators. Multiple redundancies ensure that the voting solution will be available throughout the voting period regardless of load or heavy usage.

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Section 21 – System Data, Security, and Access

File 21-10 Ballot Secure

21.10 Describe your method of securing voted paper ballots upon removal from the PPS for transport and storage.

Once the polls are closed, the voted ballots can be retrieved from the ImageCast Precinct ballot box by authorized personnel. It is a standard best practice to immediately put the completed ballots into a ballot transfer box or case. The box/case should be formally sealed, and labeled with all appropriate election information, including date, precinct, batch number, etc.

Dominion will work with the State to develop a customize methodology for handling voted ballots during collection, in transit, and in storage. Based on the unique jurisdictional needs within the State, Dominion will work collaboratively with the State to ensure the methodology meets all of its ballot security needs and requirements.

To ease the transition to the new SVS, Dominion recommends that the State retain any current and proven processes that are already in place. For instance, the secure and sealable bags the State uses for the legacy SVS portable memory devices, can be used to securely seal and transport the flash drives to the county offices along with sealed transfer boxes containing the voted ballots. The transfer boxes should be securely stored for up 22 months.

File 21-11 Chain

21.11 Describe the chain of custody best practices that you recommend for handing completed ballots during collection, in transit, and in storage to ensure the security of the ballots.

Dominion will work with the State to develop a customize methodology for handling completed ballots during collection, in transit, and in storage. Based on the unique jurisdictional needs within the State, Dominion will work collaboratively with the State to ensure the methodology meets all of its ballot security needs and requirements.

To ease the transition to the new SVS, Dominion recommends that the State retain any current and proven processes that are already in place. For instance, the secure and sealable bags the State uses for the legacy SVS portable memory devices, can be used to securely seal and transport the flash drives and USB thumb drives that are used with the proposed Democracy Suite and its ImageCast X and ImageCast Precinct components.

Completed paper ballots that have been scanned, can be transported and stored in sealed ballot transfer boxes or cases. Again, the exact details of this process can be developed collaboratively based on the State's requirements, with consultation provided by Dominion based on experience and industry best practices.

In terms of storage, the Democracy's Suite's AuditMark functionality will provide the State great advantages in terms of cataloging and finding casted vote batches. For example, ballots scanned centrally on the ImageCast Central are identified by the order in which they were scanned, and are also stored by tabulator, and by batch. Each image is labeled with the tabulator, batch, and sequence number within the batch, which corresponds to the physical ballot in the stack.

The AuditMark is appended directly to the image showing how the vote was interpreted at scan time. This AuditMark will also include any adjudications applied to the ballot for voter intent. Even if ballots for a given batch are mixed after scanning, these multiple records provide a way of correlating the digital Cast Vote Record data to the image scanned and finally to the physical paper ballot. While the AuditMark allows ballot-level auditing, it is never tied to the voter.

Dominion would recommend that when sealing completed ballots for storage, that the transfer boxes/cases are labeled and referenced according to the scanning sequence number contained in the AuditMark. Ballot images are each identified by a distinct number. This number consists of the tabulator on which the ballot was scanned, the batch number, and the index of that ballot within the batch. As an example, for the second ballot scanned in batch 245 on Tabulator 4, the scanned image filename would be 0004 0245 0002.tif).

In the event ballot ever needs to be located in the storage racks, the official must find the transfer case for Tabulator 4, Batch 245, open the box, and locate the second form in the box, which will be the desired ballot.

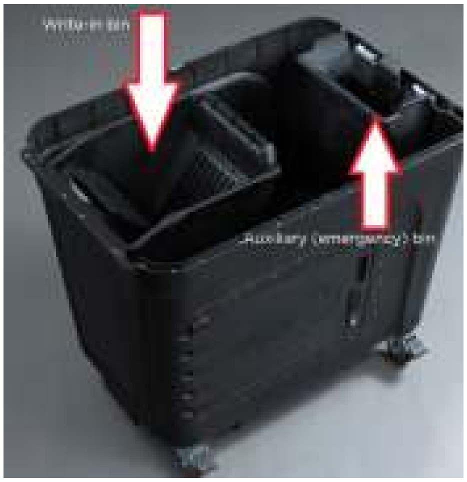
Section 21 – System Data, Security, and Access

File 21-12 Ballot Box

21.12 Describe how the proposed SVS prevents “stuffing the ballot box” with paper ballots printed from BMDs and/or photocopied or otherwise forged ballots.

The ballot box is an integrated component of the voting system. It has security features to prevent unauthorized access, including physical locks on all access doors. The ballot box is constructed out of a durable plastic material and has three ballot compartments:

- A primary compartment for storing voted ballots tabulated by the machine.
- A secondary compartment for storing ballots that have been diverted by the ImageCast Precinct for further review.
- An auxiliary compartment to be used in the event that the machine is temporarily inoperable (e.g. power failure).



Each compartment can be locked for security.

The ballot box has a lockable side door that can be opened in order to access the primary and secondary ballot compartments. This allows for the removal of ballots after the close of the polling station.

Any attempt to gain access to the ballot box is recorded on the Audit Log including the date, time, machine ID and event detail.

Once the ICP scanner is affixed to the ballot box lid, there are not openings available to someone wanting to “stuff” the ballot box with a ballot of some sort.

Additionally, the ImageCast Precinct will detect any ballot that is copied, illegally duplicated, or printed on a home printer will be rejected as counterfeit. The ImageCast Precinct will identify and reject unread ballots, which may include ballots with the incorrect ballot style, test ballots, or ballots from previous elections. In addition, the tabulators can be configured to only accept ballots printed on special security ballot paper.

All ImageCast tabulators can also be configured only to accept proprietary secure paper which can be detected by the scanner. Any other paper utilized would be rejected by the scanner, thus providing an additional layer of security. Ballots coming from remote locations (e.g. printed on home printer for UOCAVA or RAVBM) can be scanned on a scanner not configured to read this secure paper. There are number of security options related to paper that Dominion can discuss with the State during the demonstration and/or contract award phase.

Section 21 – System Data, Security, and Access

File 21-13 Ballot Box

21.13 Describe your proposed SVS' physical security features including seals, locks, and tamper-evident features and describe if there are any exposed data ports such as USB ports, cable inputs, etc. on any components.

Dominion

Dominion implements best practices for access control, including authentication and authorization protocols that meet EAC VVSG 2005 standards.

Dominion's solution relies on industry-standard security features to ensure that the correct users based on a user role or group are granted the correct privileges. All back end system, and tabulator operations are continuously and completely logged at all times to maintain a complete record of all election-related processes.

Dominion election hardware includes seals and locks such than any unauthorized access is immediately visible. Dominion's solution and accompanying equipment has minimal places where hardware can be opened and accessed. These areas can include numbered seals on voting devices, printers, and scanners/ tabulators being used at voting sites. There are multiple USB ports behind tamper-proof sealed doors that serve as connections to printers, card readers, and results cartridges. The Democracy Suite operating system and hardware are custom designed for voting system operation, and are currently configured specifically for voting purposes only, as opposed to general computer operation. In other words, the ports are currently enabled from a hardware approach to serve only specific and essential voting purposes. Disabling any port would affect essential functionality. Should there be a need to disable any port in hardware, this can be performed.

Finally, each jurisdiction is responsible for ensuring that only authorized personnel have access to both the system and tools used for installation and configuration purposes.

Mobile Ballot Printing

The proposed solution can be protected from tampering by following the steps described in detail in the Use Procedures that accompany the certified voting system. Generally, the Mobile Ballot Printing units are not public facing and consist of a Dell laptop and OKIDATA printer. The Mobile Ballot Printing software on the laptop is protected by password protection to limit access and data encryption techniques to prevent malware and malicious attacks. Aftermarket tamper-evident seals can be added to the units to protect any exposed ports or doors on the laptop and printer units.

ImageCast X

The ImageCast X has doors that will be sealed. If any seals are broken or missing, then there was tampering and the counties procedures go into effect. Because there is no data stored on the device, there is no concern of lost or compromised data. The paper ballot is the only record. The seals are the initial indicator in addition to audit logs that detect malicious access. There are virtually no false positives when implementing these procedures.

Top Security Latch *Bottom Security Latch*

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ImageCast Precinct

The ImageCast Precinct utilizes tamper-proof screws for all external fixtures on the tabulator itself and utilizes hasp-type seal points for security seals. The figures below depict the locations of the security seals.

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Section 21 – System Data, Security, and Access

File 21-2 SVS Security

21.2 In the proposed SVS, describe how you handle data security.

- **Data security for data in transit in and out of the proposed SVS from external systems.**
- **Data security for data at rest in the EMS.**
- **Data security for data in transit in the EMS.**
- **Data security for data at rest in the polling place (EPolls, PPS, and CSD).**
- **Data security for data in transit to and from the polling place (EPolls, PPS, and CSD).**

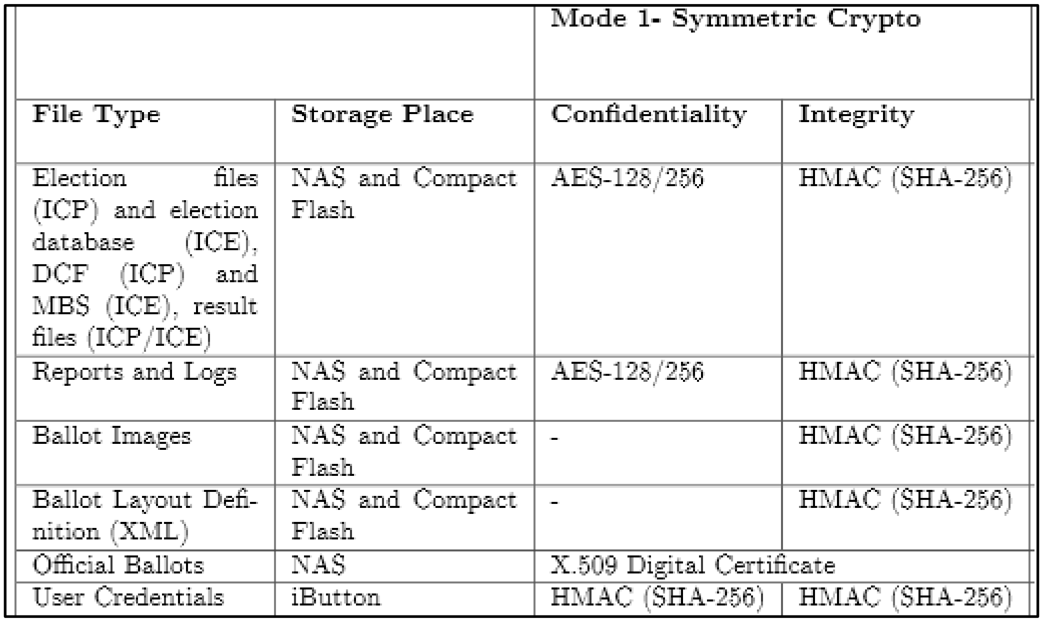
Dominion

The proposed SVS, Democracy Suite, conforms with all current NIST and EAC standards which includes strict testing against the latest VVSG (Voluntary Voting System Guidelines) 2005 stringent data security provisions. Additionally, Dominion's security protocols are designed and implemented to proactively stay compliant with the rapidly evolving EAC security requirements set forth by various iterations of the VVSG. Dominion's security technology is unprecedented insofar as it takes into account every aspect and every component of the Democracy Suite. All data generated by the proposed SVS is protected by the deployment of FIPS-approved symmetric AES and asymmetric RSA encryption.

All components of the Democracy Suite (EMS, EPolls, PPS, and CSD) offering ensure secure encryption of data in *transit and at rest*. Data traffic is encrypted using HTTPS secure connection. Dominion's system uses an SSL protocol to provide a secure channel between the voter's web browser and backend servers. SSL certificates are issued by Verisign Certificates Authority. Data generated by the Democracy Suite platform is protected by the deployment of FIPS-approved symmetric AES and asymmetric RSA encryption. The Democracy Suite Election Management System uses these techniques to encrypt election files prior to their use on ImageCast tabulators. Once the polls have been closed, the ImageCast tabulators encrypt all of the results files prior to transmitting them back to EMS.

SHA-256 hashes are used for all data integrity and verification. Should an intrusive process or altering of any file occur, hash values will be, in turn, altered as well. With that said, any presence of an intrusive process will be detected, as the hashes of any altered data will not match the value initially determined.

For communication channels (as well as data storage) a combination of security techniques for data integrity, authenticity and confidentiality is implemented. Democracy Suite integrates AES or RSA encryption algorithms for data confidentiality, along with SHA-256 and HMAC digital signatures for data signing (data authenticity and integrity).



		Mode 1- Symmetric Crypto	
File Type	**Storage Place**	**Confidentiality**	**Integrity**
Election files (ICP) and election database (ICE), DCF (ICP) and MBS (ICE), result files (ICP/ICE)	NAS and Compact Flash	AES-128/256	HMAC (SHA-256)
Reports and Logs	NAS and Compact Flash	AES-128/256	HMAC (SHA-256)
Ballot Images	NAS and Compact Flash	-	HMAC (SHA-256)
Ballot Layout Definition (XML)	NAS and Compact Flash	-	HMAC (SHA-256)
Official Ballots	NAS	X.509 Digital Certificate	
User Credentials	iButton	HMAC (SHA-256)	HMAC (SHA-256)

File Type to Security Algorithmic Mappings

From the initial state of the election project, until the deactivation state, the EMS system maintains an activity log within the EMS Database. This activity log contains every action that any of the users have performed within the system and represents a detailed audit log that can be analyzed and printed in the form of an audit report. The audit record information cannot be modified or permanently deleted using the EMS client applications. It can, however, be exported for archiving purposes as part of the record retention policy. Keeping in mind that audit log information can contain a significant amount of information, it is the responsibility of the administrative user to perform regular archiving of the log. During the voting phase of the election event, ImageCast devices also keep an activity audit log which tracks events happening on the device itself.

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Section 21 – System Data, Security, and Access

File 21-3 Security Assess

21.3 Describe how and how often your business is assessed for cybersecurity and your notification plan to GASOS of any incidents, events, or threats. What standards are followed in establishing cybersecurity to protect your development and repair environment?

Dominion

Dominion Voting takes extensive measures to protect the security of our company and its products. Technological advances over the past decade have made voting systems more secure, reliable and resilient. However, as cyber security threats evolve and change, so do risks and vulnerabilities.

We recognize that maintaining our company security posture – as well as our longstanding record of providing safe, reliable and transparent voting systems – requires constant vigilance and engagement. Our company is proactively working on a daily basis to meet the dynamic security threats faced by the elections industry with robust cyber security system protections, a companywide commitment to security and ongoing collaborations with government.

Company efforts include:

- Comprehensive Information Security Program
- Ongoing Focus on Product & Customer Security
- Government Threat and Intelligence-Sharing

Comprehensive Information Security Program

Security is a core tenet of Dominion Voting's company culture. Over the course of our 15-year history, we have invested in security programs and IT personnel with a focus on enhancing company security and product features, including: Access Controls, System Hardening, Incident Detection and Monitoring/Auditing Capabilities.

- Dominion Voting's Information Technology staff has grown significantly in the past few years, most notably with the recent addition of a Chief Security Officer who is focusing on companywide risk management and security with our executive leadership team and the support of an independent risk management firm.

- Dominion Voting uses in-house experts and third-party security providers to assess company practices and products. We regularly incorporate state-of-the-practice controls to strengthen cybersecurity and accountability. We also employ tools and resources to technically and operationally mitigate risk across the lifecycle of products from design through disposal. All new hires and third-party contractors must submit to a company screening process and a background check.

- Dominion Voting is proactively working to enhance our company's information security program standards, policies and controls utilizing the voluntary National Institute of Standards and Technology (NIST) Framework for Improving Critical Infrastructure Cybersecurity ("NIST Cybersecurity Framework"). Our company continues to prioritize and enhance our incident detection, logging, monitoring and response capabilities to prevent compromises and sophisticated attacks.

- Dominion Voting takes extensive measures to safeguard our voting systems throughout their lifecycle. Within the company, we collaborate across IT, engineering and operations to secure our supply chain assets (products, facilities, equipment, information and personnel) from theft, manipulation, damage or attack. We also work closely with our customers - U.S. election administrators - and other government partners to test and certify our systems for security, accuracy, reliability and resilience.

Further, Dominion understands that election officials need to ensure that the significant investment required to upgrade a voting system is made with confidence and peace of mind that technology will keep up with changing requirements, public expectations, and constantly evolving cybersecurity standards. Dominion's development team is continually working on refining existing products and functionality, leading to annual VVSG 2005 certification campaigns with the EAC, as well as state certifications.

A security audit was performed on the proposed SVS, Democracy Suite 5.5A, during the certification phases of the product release. A VSTL (voting system test laboratory) performs all required tests and documentation reviews on behalf of the EAC for the federal certification.

Dominion will worth with the GASOS to ensure the SVS meets all applicable cybersecurity assessments required by the State. This includes the potential for any independent/external audits of Democracy Suite that the State would like to pursue.

Per our standard Notification Plan, Dominion will immediately notify GASOS of the (verbally if necessary and thereafter followed up in writing) if Dominion becomes aware of any actual or suspected events or threats, and will immediately take all necessary measures to investigate and mitigate such breach and prevent further breaches. In the event of an actual or suspected privacy breach, Dominion will immediately quarantine, investigate, and provide an assessment of the breach, and provide solutions to prevent future breaches. Any potential compromise will follow the outlined escalation process and will be treated in an expeditious manner. All compromises will be handled at the EVP level with General Counsel and Director of IT input.

Additionally, Dominion will provide GASOS an after-action report for any such incidents that includes future mitigation strategies.

Within Dominion Voting, information security best practices are fully integrated within the system from initial design, through development, ongoing testing and deployment. Our development, repair, and testing environments abide by the same standards as our productions systems.

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Section 21 – System Data, Security, and Access

File 21-4 Best Practices

21.4 Describe the best practices that you recommend for protecting the environment that you are proposing for the SVS.

Dominion

Software Security Best Practices
Within Dominion Voting, information security best practices are fully integrated within the system from initial design, through development, ongoing testing and deployment. With a dedicated team of engineers for all security aspects of the system components, we practice a holistic approach to information security.

Everything starts with our risk management process, which clearly identifies all the assets within the system, performs classification of those assets, and includes a full risk assessment. Information security risk management is the process of assessing the risks to an organization's information and determining how those risks can be controlled or mitigated. In any well-defined risk management program, two formal processes are defined:

- Risk identification and assessment
- Risk control

When defining the security specification of an IT system (including the Democracy Suite system) three pre-requisite steps within the risk identification and assessment need to be performed:

1. Asset Identification: Includes people, procedures, data and information, software and hardware.
2. Information Classification: According to assets' sensitivity and security attributes.
3. Risk Assessment: Includes threat identification and vulnerability assessment.

Security in any system should be commensurate with its risks. Therefore, the above listed pre-requisite steps provide enough input information in the decision process on how and which security mechanisms and controls are implemented.

The tangible and non-tangible assets, which exist within the Democracy Suite platform, are identified as:

- Server side computing platforms (both software and hardware).
- Client side computing platforms (both software and hardware).
- Network infrastructure (optional, both software and hardware).
- Tabulation Devices (both software and hardware).
- Pre-voting election data.
- Voting election data.
- Post-voting election data.

When considering a qualitative approach to risk assessment, it can be concluded that all of the critical information assets have the highest possible security impact on the overall election process. Loss of any of the critical election information assets would cause the election system to fail.

However, the probability of critical election information asset loss is difficult to estimate. In most cases, it depends not only on the architecture and design of the system, but also on the motivation of potentially malicious users. Thus, it is expected that a motive will always exist.

Therefore, the probability of loss mostly depends on the Democracy Suite system internals. Depending on the processes used during the development, testing and integration phases, as well as on overall quality attributes of the system components, the probability of loss can be reduced or elevated.

From the quantitative risk assessment point of view, possible threats to the system have been analyzed and its vulnerabilities have been minimized by implementing a variety of countermeasures such as deterrent, preventive, corrective and detective controls:

- Deterrent controls reduce the likelihood of a deliberate attack.
- Preventative controls protect vulnerabilities and make an attack unsuccessful or reduce its impact.
- Corrective controls reduce the effect of an attack.
- Detective controls discover attacks and trigger preventative or corrective controls.

Physical Security Best Practices

Dominion Voting Systems works in partnership to ensure safe and secure voting environments led by industry recognized physical security best practices. They include but are not limited to physical security, personnel security and cyber security.

Security—Personnel

Another important factor in determining the vulnerability of a system is the people involved; it is they who must implement security policies and procedures and defend against any attacks.

Qualification guidelines should be established for choosing the person(s) for operating and administrating (creating databases, defining ballots, testing, and maintaining equipment) the voting system.

- Perform background checks on election officials authorized to define and configure elections and maintain voting devices to minimize the risk of election tampering.

- Custodians of voting machines must be fully competent, thoroughly trained, and sworn to perform their duties honestly and faithfully.

- Develop a detailed “Rules of Security Behavior” sign-off sheet for all levels of personnel responsible for using the voting system (election director, chief judges, poll workers, rovers, field technicians, etc.) and maintain a copy of the signed forms on file.

Establish policies and procedures for visitors and observers. At minimum, these procedures should include employee-monitored entrances and exits with a sign-in/sign-out log and issuance of a numbered visitor badge to be worn at all times.

Security—Election Process
Securing the Voting Devices During Preparation and Transport to Precinct

The voting devices should be secured with tamperproof numbered seals. Access to the voting devices’ power control and election results storage media should be secured (controlled) within the voting device. The serial number of all seals should be recorded for verification during precinct setup.

It is recommended that for each voting device, records are kept of the following:

- The serial number of the voting device.
- The serial number of all seals used to secure the voting device for delivery.
- The number registered on the protective counter.
- The serial number of the seal used to secure the voting device after the polls have closed.

Develop an operational plan defining what will be delivered, where, by whom, and when. Use delivery sheets to keep track of the exact polling place each voting device is delivered to.

It is strongly recommended that the auxiliary voting equipment and supplies (ballot activation devices, Administrator devices, communication equipment, seals for poll closing, etc.) remain in the possession of election officials until the opening of the polls on Election Day. If the voting devices are delivered to the polling location before Election Day, they must be secured at the polling location (e.g., cabled together and locked or secured in a locked room). Any other voting equipment or supplies should also be secured. Designated poll manager(s) should verify receipt and sign-off on the delivery of voting devices and necessary election supplies (ballot activation devices, administrator devices, communication equipment, closing seals, etc).

Securing the Voting Devices on Election Day—
Precinct Setup

If voting devices and election supplies are delivered to the polling place by anyone other than poll managers, the poll manager(s) should verify the serial numbers of all voting devices and necessary election supplies (ballot activation devices, administrator devices, communication equipment, closing seals, etc.).

Designated poll managers should verify voting device numbers and the numbers of all seals and tamper-resistant tape on all voting devices and inspect the voting devices for evidence of tampering. This should be a two-person integrity security process and all poll managers should sign-off on this validation.

Voting devices setup should be as follows:

- Access to the voting devices' power control, counter controls, and election results storage media must be controlled within the voting device and inaccessible to the voter.
- Voting devices exterior should be in plain view of the poll managers at all times. Poll managers should maintain control of all administrator and ballot activation devices.

We look forward to working with the State of Georgia at both the state level and individual county level to review best security practices to ensure your elections are secure, transparent, and accurate.

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Section 21 – System Data, Security, and Access

File 21-5 Connect

21.5 Describe if the proposed SVS employs any type of wireless, Bluetooth, or internet communication. If yes, what protocols and what security standards do you use? Can it be turned off and still allow the SVS to function?

Dominion

The proposed SVS, Democracy Suite, will not employ wireless, Bluetooth, or internet communication. The Democracy Suite and its components will be built on a closed network configuration.

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Section 21 – System Data, Security, and Access

File 21-6 Access

21.6 What type of user access protection is required for each part of the proposed SVS? What is required for administrative and maintenance access to SVS equipment?

Dominion

Democracy Suite integrates a role-based access control system for all software and hardware components. Each user accessing the system is the member of one of the predefined or custom-made roles. Each role has its own set of permissions, or actions that users of that role are allowed to perform. This access control approach provides authentication and authorization services and can be granular according to the jurisdiction's needs and organization. Complete user and role membership management is integrated within the Democracy Suite EMS Election Event Designer client module.

For each election cycle, the system administrator should plan out the expected system users as well as the functions they will be performing within the system and create role-based user accounts, for each user accordingly. User accounts should be created for each user and users will be granted only the necessary privileges to perform their assigned job functions. The main types of user accounts that will be created are as follows; however, nuanced permissions can be determined and set up during training and system configuration):

- Election definition – Users with privileges to build and define elections
- Election proofing – Users with read-only privileges to conduct proofing activities on election data
- Audio creation – Users with read/write access to modifying audio files for each election
- Audio proofing – Users with read-only privileges to conduct proofing activities for election audio
- Adjudication users – Users with permissions to resolve ballots presented for adjudication
- Adjudication administrators – Users with permissions review resolved ballots and submit batches for reporting
- Reporting – Users with privileges for validating and publishing results and running reports
- The ImageCast X also has predefined group roles for access including technician access (for programming the election files) and poll worker access for opening/closing the polls and activating ballots.

Each jurisdiction is responsible for ensuring that only authorized personnel have access to both the system and tools used for installation and configuration purposes. All back end system, and tabulator operations are continuously and completely logged at all times to maintain a complete record of all election-related processes.

Dominion typically works with its customers to develop appropriate processes and procedures around equipment maintenance. The State's existing processes will be adapted to suit the new system, to ensure compliance with all applicable jurisdictional standards.

Additionally, Dominion shall perform one on-site preventative maintenance inspection ("PM") per year on Hardware during the Agreement Term at a time mutually agreed to by the Parties. This on-site PM is expected to be scheduled at least ninety (90) days prior to requested test date. Dominion shall perform the annual PM and will replace any and all parts that fail due to normal use during the warranty period. In the event of a warranty claim outside of the scheduled PM, additional on-site service will be available at Dominion's then current time and material rates. There are no additional charges for parts covered by this warranty.

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Section 21 – System Data, Security, and Access

File 21-7 Updates

21.7 Describe the process for updating the proposed SVS as security requirements change. Describe how often updates are supplied and the certification process for these updates.

Dominion

Dominion understands that election officials need to ensure that the significant investment required to upgrade a voting system is made with confidence and peace of mind that the technology will keep up with changing requirements and public expectations. Dominion's development team is continually working on refining existing products and functionality, leading to annual VVSG 2005 certification campaigns with the EAC, as well as state certifications where required.

All future system enhancements are designed within the context of the U.S. Election Assistance Commission's (EAC) proposed Voluntary Voting System Guidelines 2.0 (VVSG) Principles and Guidelines, which are still within a public comment period as of the submission of this proposal. Dominion has been closing monitoring the evolution of VVSG 2.0, to proactively prepare future enhancements for Democracy Suite that will comply with all need certification requirements.

Dominion's security technology is unprecedented insofar as it takes into account every aspect and every component of the Democracy Suite platform. This includes – but is not limited to – the full encryption of election projects, iButton security keys, Compact flash cards, election data, software applications, elections results files, and data transmission. In addition, Dominion developed a custom ballot authentication system built around an (optional) secure ballot paper stock and in-tabulator authenticators.

The State will be informed of any system updates planned and the impact or benefit they will provide to the current certified version in the field. Once clearly understood, the update will be offered to the State and counties and Dominion will provide assistance in loading the updates. Normally Dominion develops and certifies updates annually.

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Section 21 – System Data, Security, and Access

File 21-8 Key

21.8 Describe if any component of the proposed SVS has a key, dongle, licensing time clock, or disabling device.

Dominion

Some components of Democracy Suite products use require iButtons or Access Cards to gain access to the unit and any authorized menus to perform various functions. iButtons and Access Cards contains a hash value with the specific election project key identifying the election hosted by the machine at that point in time. iButtons and Access Cards from previous elections would not be recognized by the system.

The ImageCast Central require technician access using multifactor authorization techniques. The ImageCast Central would require an iButton as well as a username and password to access the technician menu before any outside device could gain system access.

The ImageCast Precinct tabulator requires an activated iButton at startup and to access any pollworker or technician menus. Upon accepting the iButton, the ImageCast Precinct will also require an authorized username and password to access any pollworker or technician menus.

The ImageCast X requires a Technician Card or Pollworker Card at startup, and also asks for an authorized username and password to access any system menus. A voting session is activated by a pollworker who uses their Pollworker Card and enters an authorized username and password. Similarly, access to the Technician menus requires a Technician Card and an Authorized username and password.

Any operation performed on any device is recorded in the Audit Log, which records the user, date and time, event and machine ID.

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Section 21 – System Data, Security, and Access

File 21-9 Footprint

21.9 For physical security purposes, provide footprint dimensions for storage and use for all equipment proposed in the SVS environment including stacking height for storage and placement spacing while in use. Also, list all GASOS or county supplied equipment that would be required to store and use the proposed SVS (i.e. tables, chairs, extension cords, privacy shielding, computer hardware, etc.).

Dominion

Below Dominion has provided footprint dimensions for each proposed system component in relation to use, transport, and storage. In addition, we have included customized storage and transportation solutions that would assist in the deployment of equipment.

Major system hardware components can be delivered in their original packages as detailed below.

The in-person voting systems will require transporting to and from the storage facility that uniquely relates to each county. Then servers, printers, and other static devices would normally be left on the table or desk year-round, and if not in use, have a dust cover for protection. Dominion can work with the GASOS and each County to customize storage and transport products that match the requirements each may have.

ImageCast X Tablet

Each ImageCast X Touchscreen Tablet from Avalue comes packaged in its original box with molded foam inserts for maximum protection. Each box weighs approximately 23 pounds and measures:

H = 26 inches
W = 16 inches
D = 11 inches

The ImageCast X units should not be stacked on top of one another for storage unless they are in their respective carrying cases or packaging boxes (Suggested Maximum Stack = 5 Boxes High)

ImageCast X BMD printer

The ImageCast X's accompanying printer is manufactured by HP and comes in its original packaging with foam inserts for maximum protection. Each box weighs approximately 19 pounds and measures:

H = 18 inches
W = 17 inches
D = 11 inches

Printers should not be stacked on top of one another for storage unless they are in their respective carrying cases or packaging boxes (Suggested Maximum Stack = 5 Boxes High).

ImageCast Precinct

The ImageCast Precinct comes in a standard packaging including foam inserts for maximum protection. Each box weighs approximately 14 pounds and measures:

H = 3 inches
W = 17 inches
D = 13 inches

The accompanying ballot box, with the lid attached weighs approximately 85 pounds and measures:

H = 44 inches
W = 25 inches
D = 38 inches

The tabulators should not be stacked on top of one another for storage unless they are in their respective carrying cases or packaging boxes (Suggested Maximum Stack = 5 Boxes High). Alternatively, the ImageCast Precinct tabulators can be stored on the ballot box with the lid affixed and should not be stacked.

ImageCast Central CPU

The ImageCast Central CPU is shipped with standard packaging from Dell with foam inserts for maximum protection. The box weighs approximately 18 pounds and measures:

H = 19 inches
W = 23.5 inches
D = 7.5 inches

CPUs should not be stacked on top of one another for storage unless they are in their respective carrying cases or packaging boxes (Suggested Maximum Stack = 5 Boxes High).

ImageCast Central G1130 Scanner

The Canon G1130 is easily scalable to meet the needs of most jurisdictions. The G1130 is shipped with standard packing from Canon with foam inserts for maximum protection. Each box weighs approximately 52 pounds and measures:

H = 16.5 inches
W = 25.5 inches
D = 23 inches

Scanners should not be stacked on top of one another for storage unless they are in their respective carrying cases or packaging boxes (Suggested Maximum Stack = 4 Boxes High).

Canon M160ii

The Canon MG160ii is smaller scanner meant to meet the needs of smaller jurisdictions. The MG160ii is shipped with standard packing from Canon with foam inserts for maximum protection. Each box weighs approximately seven (7) pounds and measures:

H = 9.09 inches
W = 11.02 inches
D = 9.76 inches

Scanners should not be stacked on top of one another for storage unless they are in their respective carrying cases or packaging boxes.

Adjudication Workstation

The ImageCast Central workstation is comprised of a Dell all-in-one computer and Canon G-1130 scanner, which is connected to the computer via USB. The Adjudication workstation is comprised of a Dell computer and monitor. The approximate footprint of all components could comfortably fit in a 30”x30” desk or table space.

Note: ImageCast Central and Adjudication workstations can be networked together. Up to fifty (50) ImageCast Central workstations and fifty (50) Adjudication workstations can be networked together at the same time. The ImageCast Central scanning stations and Adjudication stations are connected with a Gigabit Ethernet network.

Client Workstation

A typical Democracy Suite workstation will include such components as a Dell T3420, 24" monitor, iButton programmer, high speed media reader, patch cable, and a smart card reader/writer. The approximate footprint of all components could comfortably fit in a 30"x30" desk or table space.

Mobile Ballot Printing

All mobile ballot printers are transported in their original packaging. Their dimensions are:

OKIDATA C712DN

- Dimensions(WxDxH) 17.1" x 23.8" x 15.3"
- Weight Approx. 68.3 lb.

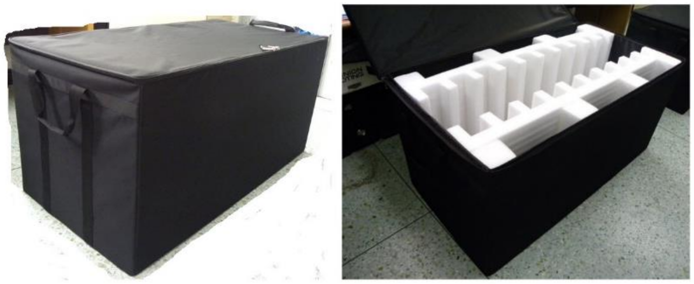
The Mobile Ballot Printing solution consists of a compact laptop and OKIDATA printer. These devices can be easily transported in a delivery vehicle or car. The OKIDATA printers should be transported in their original packaging. This will prevent moisture and dust from affecting the electronic components of the election machinery and protect it from scratches, dents or damage. The packaging also includes foam inserts for impact protection. The mobile ballot printing station, including the corresponding Dell Latitude E3480 (HxWxD 0.92" x 13.28" x 9.6", 3.87 lbs.) could fit comfortably 40" x30" desk or work table space.

Alternative Storage Solutions

Dominion can offer a range of customized storage and transportation solutions based on our experience with large entities such as the City of Chicago, Clark County Nevada, the State of Louisiana, and many other entities. Detailed footprints will vary based on your needs and may include:

For large precincts, the below rolling unit can hold 10 ImageCast X voting units, along with their accompanying printers, offering an efficient use of space for both transportation and storage. In Clark County, NV this customized storage and delivery option provided for a nearly 50% decrease in both storage and transportation costs alone.

Additionally, we can offer a soft sided bag that holds 10 ImageCast X tablets.



The example to right is for medium sized precincts holds 4 ImageCast X units and their printers on four sturdy casters with a front door providing for easy access to the voting units. The side handles provide for easy movement and also provide points to secure the units in transport.

Other options for precincts requiring fewer voting units are pelican cases or rolling cases that can be used to transport 2 ImageCast X voting devices and printers. The varying sizes of available pelican cases and rolling bags can also be configured allow for customizable foam inserts that can accommodate associated hardware such as the ImageCast Central, scanners, activation stations, and other materials.

Two unit ImageCast X Bag

Single Unit ImageCast X Printer Bag

There are numerous other transportation cases and carts in a variety of configurations available on the commercial market. For example, working with the City of Chicago, Dominion developed a fully customized all-in-one Election Supply Carrier that will hold multiple voting units, supplies, and everything needed to set up operations in individual precincts. We would look to work with the State to create a fully customizable and scalable solution to meet your transportation and storage needs as each county will most likely have specific storage demands.

[redacted]

Section 22 – Post Election Audits

File 22-1 Tab Audit

22.1 Describe the proposed SVS' hardware and software features that facilitate post-election tabulation audits.

The Results Tally and Reporting application is very flexible in its configuration and reports can be customized to suit the needs.

Democracy Suite's Results Tally and Reporting creates a Statement of Votes Cast report providing election officials with the detailed results of an election. The report is divided into two sections: the first section is an overview of the cards cast and eligible voters broken down per precinct, district, and district type. The second section shows the election results on a contest-by-contest basis and includes the number of ballots cast, the vote totals for each candidate, and the number of write-ins, undervotes, and overvotes.

The user can customize the report title and allows for extensive filtering and customizations including:

Contest Statistics:

- Times Cast
- Undervotes
- Overvotes
- Double votes
- Total votes
- Counting Group Totals Only
- Write-in Overrides
- Vote For

Candidate Statistics:

- The user can break down results per party affiliation in the case that candidates are cross-endorsed by leaving the item unchecked
- The user can display remaining Unresolved Write-in column or to hide that column
- The user can choose to count unresolved write-ins as undervotes.
- The user can select how percentages are calculated:
  - No percentages
  - Divided by Votes Cast
  - Divided by Ballots Cast

- The user can select how Write-Ins are represented:
  - No Write-ins
  - Combine - show single Write-In

    - Split - show individual Write-In positions in the contest

- The user can choose how to split the data:
    - By Precinct
    - By District Detailed information
    - Precinct Portion
    - By Ballot Type

Additionally, the Dominion Suite's RTR offers a variety of reports that can be generated to satisfy the reporting needs of the State. Reports described earlier include the Statement of Votes Cast, Election Summary Report. Cast Votes Record, which goes down as granular as every mark read by every scanner in the system. Reports allow filtering by Polling Location, Tabulator and Counting Group and further customizations can include a number of statistics including: Times Cast, Undervotes, Overvotes, Total Votes, Counting Group breakdown, Write-Ins, Percentage by ballots cast or by votes cast, sorting of candidates by global order or by votes received. Filters by contest, precincts, or districts can be applied. Report titles can be modified to indicate unofficial or canvass results. Report profiles can be saved, loaded and exported between election projects.

The Contest Filtering screen allows users to select specific contests to be adjudicated. This option is specifically for recount situations where the focus is only on individual contests. Only ballots with the selected contest(s) will be shown in adjudication and only the selected contest(s) will be allowed to be adjudicated.

The Democracy Suite EMS system supports on-screen electronic, post-election canvassing and auditing for all ballots tabulated during an election. Our Democracy Suite Results Tally and Reporting module includes a full export of all Cast Vote Records (CVR) from the system. This export is available in a JSON format to support any risk-limiting audits or post-election analysis on individual vote records. The CVR export includes references to the ballot image data from all tabulator channels as well as providing a full, robust audit solution on a ballot-by-ballot basis. The results files, audit files, and ballot images themselves can be exported to support the state-mandated 1% Manual Recount and other required canvassing. These files can be sorted by a variety of criteria – contest, candidate, precinct, ballot ID or type, tabulator, polling location, counting group, batch ID, reporting status, ballot exception, etc. and multiple filtering criteria can be applied. The sorted results files and ballot images are extracted and presented to the system administrator in a directory for viewing, printing or distribution.

At the heart of Dominion's Democracy Suite system, we emphasize transparency. Every single ballot in the election is imaged and appended with Dominion's patented AuditMark, a record of how the system interpreted the voter's selections. This ballot-level audit trail allows election officials and other stakeholders to review not only the ballot images, but also the tabulator's interpretation of each ballot.

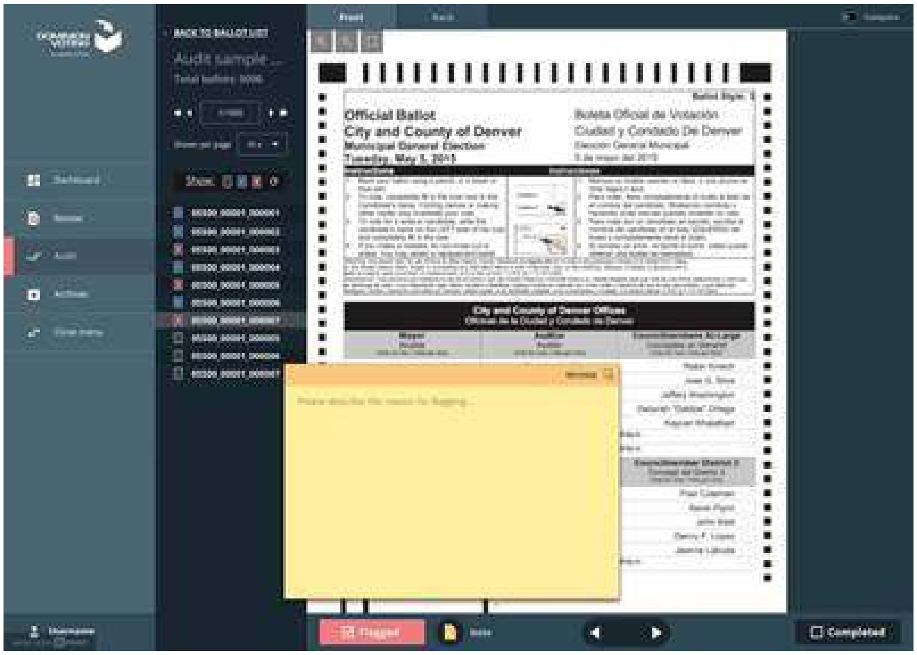
Section 22 – Post Election Audits

File 22-2 Risk Audit

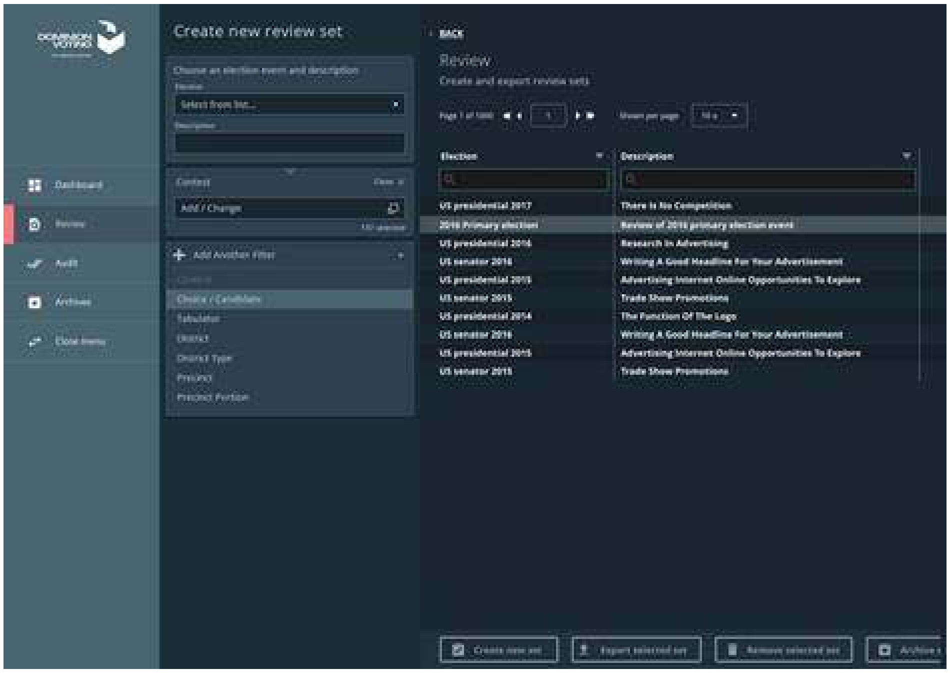
22.2 Describe the proposed SVS' ability to facilitate risk limiting audits including the creation of a cast vote record and the format of the cast vote record.

Dominion's Democracy Suite solution can facilitate recounts, manual hand counts, and risk limiting audits. The system can identify and automate the removal of selected ballots from a batch for recount purposes.

The Dominion Ballot Audit and Review (BAR) module will provide the State a robust, highly configurable system to support a variety of review and audit capabilities for all ballot images and associated Cast Vote Records (CVRs) in the Democracy Suite system. BAR uses a similar interface as our Adjudication system. Users can view the ballot image captured by the tabulators at scan-time and these images can be compared against our patented Audit Mark, as well as the digital CVR use for tally and reporting. Users have the ability to flag any suspect ballots for further investigation. Each image/CVR combination is correlated to a given tabulator and batch of ballots scanned making it easy to find the specific ballot paper for further investigation if needed.



The power of the BAR system comes in the variety of filters which can be applied to the entire set of ballots in the election. Users can filter all images by precinct, district, or even split. Users can filter all ballots down to an individual contest so that only ballots with that contest are viewed. In addition, ballot sets can be filtered by outstack conditions such as overvotes, undervotes, or blank ballots. And ballots can be further filtered based on the amount of the target fill on the ballot e.g. a user can elect to only view ballots that have a contest for state representative, where the oval is only filled in between 5% and 12%. All of these filters are dynamically controlled and multiple review/audit sets can be created. Any ballots that may be flagged for further review allow notes to be appended to the review set containing further information about possible discrepancies.



Election	Description
US presidential 2017	There Is No Competition
2016 Primary election	Review of 2016 primary election event
US presidential 2016	Research In Advertising
US senator 2016	Writing A Good Headline For Your Advertisement
US presidential 2015	Advertising Internet Online Opportunities To Explore
US senator 2015	Trade Show Promotions
US presidential 2014	The Function Of The Logo
US senator 2016	Writing A Good Headline For Your Advertisement
US presidential 2015	Advertising Internet Online Opportunities To Explore
US senator 2015	Trade Show Promotions

BAR can also be used to provide ballot images subject to open-records request depending on state statutes. The system can identify ballots with potentially identifiable stray marks (notes, or signatures on ballots) outside of the standard voting target areas. The system will allow users to redact the entire ballot from the open-records set, or provide limited redaction of any identifiable information.

The BAR system can be used to conduct or support a variety of auditing methodologies including random ballot selections, random precinct selection, or even to support a variety of Risk-Limiting-Audit (RLA) methodologies.

Audits using RLA methodologies are an evolving practice which can take on a variety of implementations. Ultimately, an RLA will determine the number of randomly selected ballots throughout the entire set of ballots that must be audited/reviewed to provide a certain level of confidence that a hand-count of all the ballots would achieve the same result. BAR can import a random set of ballot indexes (provided through an RLA random selection routine) to provide a jurisdiction an efficient way to review these ballot images and CVR data to conduct the verification step of the RLA process.

Dominion's BAR module will provide the State with an industry leading tool for all review and auditing purposes.

In addition to the Ballot Audit and Review System, the Democracy Suite also enables authorized users to create ballot review sets by filtering for any given audit scenario including specific requests from Election Committees and other internal and external parties. Users may make notes to individual ballots and ballot review sets to aid in follow-on reviews and audit discussions. Administrators may create and assign a ballot review set to a specific official. Upon reviewing each ballot, officials may add a note, mark it for additional review, or mark it as complete. Ballots within a ballot review set may be sorted against these attributes as desired.

Efficiency is realized through filtering and sorting capabilities. Officials may select specific filter criteria including District, Precinct, Precinct Split, Contest, Candidate, Tabulator, Outstack Conditions, Mark Fill Percentage, Adjudicated, Ballot Type, and/or Ballot ID.

Flexibility is realized through user-friendly screen designs to aid in the rapid selection of filters and their choices in both large and small data set scenarios. Furthermore, the Administrator may choose to distribute a large ballot review set across multiple users to speed the review process.

The Cast Vote Record (CVR) export, in JSON format, includes the highest degree of granularity, detailing up to each mark read by the system.

In order to ensure that voter intent on hand marked paper ballots is captured accurately by the tabulators, ImageCast scanners are designed to identify and reject ballots that are unreadable due to ambiguous marks.

Dual Threshold ambiguous mark detection is a Dominion exclusive technology. The pixel count of each mark is compared with two thresholds (which are defined through the EMS by the Election Official) to determine if the mark constitutes a vote. If a mark falls above the upper threshold, it is tallied as a valid vote. If a mark falls below the lower threshold, it will not be counted as a vote. However, if a mark falls between the two thresholds (known as the “ambiguous zone”), it will be deemed as a marginal mark and the ballot will be returned to the voter for corrective action (in a precinct level deployment).

With this feature, the voter is given the ability to display his or her intent by re- marking the ballot to make an unambiguous selection, rather than a recount board or some other “after the fact” attempt to determine voter intent. In a central scanning scenario, ballots with ambiguous marks are sent to the Adjudication application for review and processing.

eRFP Proposal for the Georgia Secretary of State
2019
eRFP Name
Statewide Voting System
eRFP Number
47800-SOS0000037
Vendor Name
Dominion Voting
Vendor Address
1201 18th Street, Suite 210
Denver, Colorado 80202
Vendor Point of Contact and Contact Information
Barry Herron
barry.herron@dominionvoting.com
419-35-8455

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Vendor	Dominion Voting
	The purpose of the Cost Model for this eRFP is to provide a fixed price fee structure for initial purchase and a total cost of ownership for a yen (10) year period so that the Suppliers' responses can be compared equitably. **At a minimum**, each Supplier should provide the details for the line items requested for: the initial purchase requirements, installation, cost through December 31, 2021 as covered in the warranty period, and the remaining costs for the ten (10) year term of the contract.
	Each Supplier is encouraged to supplement this pricing information with additional details as a separate worksheet and/or line items to demonstrate a fully loaded cost. Pricing information should support and demonstrate the ability to cover all costs associated with the requirements and as detailed in your responses to the Mandatory Scored Questions.
	Note that the Cost Model Evaluation will include the initial ten (10) year term of the contract to ensure that the interest of the counties is represented in the proposal and for them to budget for future years. The initial cost through December 31, 2021 to fully purchase, distribute, implement, and train all GASOS employees and counties (fully loaded) will be considered under and constrained by the budget proposal as defined by the Georgia General Assembly.
	The initial cost through December 31, 2021 to fully purchase, distribute, implement, and train all GASOS employees and counties (fully loaded) will be constrained by the budget proposal as defined by the Georgia General Assembly.

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	eRFP
	This section will be used to capture the total contract cost for the initial equipment purchase, implementation, and training and will be included in the Cost Model Calculation.
	Post Warranty
	After the initial purchase and two year initial warranty period through December 31, 2021, the state and counties will need details for the additional cost to support the software via software and licensing fees and all equipment through applicable additional maintenance and warranty costs. This worksheet is to provide these details and will be included in the Cost Model Calculations.
	County Purchases
	After the initial purchase and two year initial warranty period through December 31, 2021, counties will need details for the additional cost for consumables to support elections for counties of various sizes. The cost model includes four sections to capture the cost for extra large counties (200,000 ballots), large counties (75,000 ballots), medium counties (35,000 ballots) and small counties (10,000 ballots) to be included in the Cost Model Calculations. There is an additional section for reference only that will be used as check sum and data point for consumables to support an election with 7,000,0000 ballots and will not be included in the Cost Model Calculations.
	Implementation Worksheet
	This worksheet is to be used to show your detailed implementation costs and will be a subset of the total of your implementation costs as captured in the eRFP tab. This worksheet will not be included in the Cost Model Calculations except as an item in the eRFP tab and line item total.
	Cost Calcs
	The Supplier is to provide no information on this tab, it is to be calculated from the populated sections covered. The Supplier should confirm and check that the totals from the individual worksheets are accurately reflected.
	Additional Products and Services
	This worksheet will be used to capture future equipment purchases that may be independently made and pricing that could be used to create a Contract MSLA and will not be included in the Cost Model Calculations.

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SVS components included in the eRFP	Qty	Price Per Unit	Total Price	Notes
Election Management System (EMS) - Software & Hardware	1	$834,673.35	$834,673.35	All components needed for operation at state level and 159 counties
Electronic Poll Bool Management System (EPDMS) - Software & Hardware	1	$30,000.00	$30,000.00	All components needed for operation at state level and 159 counties
Electronic Poll Book (EPoll)	8,000	$871.50	$7,982,000.00	All components needed for operation
Ballot Marking Device (BMD) (with ability to stand and provide privacy)	30,050	$2,016.17	$60,585,908.50	All components needed for operation
Polling Place Scanner (PPS) and Ballot Box	3,500	$2,430.36	$8,506,260.00	All components needed for operation
Central Scanning Device (CSD)	165	$4,950.11	$816,768.15	All components needed for operation
Implementation and Training Cost	1	$14,772,004.80	$14,772,004.80	All services needed for full implementation (Use Implementation Worksheet for Detail)
		TOTAL:	**$93,527,614.80**	

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Post Warranty Cost

Item Description		Annual Software License and Support							
	Units	2022	2023	2024	2025	2026	2027	2028	2029
Election Management System (EMS)	1	$190,500.00	$190,500.00	$190,500.00	$190,500.00	$190,500.00	$190,500.00	$190,500.00	$190,500.00
Electronic Poll Bool Management System (EPDMS)	1								
Electronic Poll Book (EPoll) - included in maintenace	8,000	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Ballot Marking Device (BMD)	30,050	$2,319,108.75	$1,660,342.25	$1,660,342.25	$1,660,342.25	$1,660,342.25	$1,660,342.25	$1,660,342.25	$1,660,342.25
Polling Place Scanner (PPS)	3,500	$410,571.00	$293,636.60	$293,636.60	$293,636.60	$293,636.60	$293,636.60	$293,636.60	$293,636.60
Central Scanning Device (CSD)	165	$287,605.50	$205,113.81	$205,113.81	$205,113.81	$205,113.81	$205,113.81	$205,113.81	$205,113.81
TOTAL:		$3,207,785.25	$2,349,592.66	$2,349,592.66	$2,349,592.66	$2,349,592.66	$2,349,592.66	$2,349,592.66	$2,349,592.66
								TOTAL:	**$19,654,933.87**

Item Description		Annual Hardware Maintenance Fees							
	Units	2022	2023	2024	2025	2026	2027	2028	2029
Electronic Poll Book (EPoll)	8,000	$1,000,000.00	$1,000,000.00	$1,000,000.00	$1,000,000.00	$1,000,000.00	$1,000,000.00	$1,000,000.00	$1,000,000.00
Ballot Marking Device (BMD)	30,050	$2,396,412.38	$1,593,886.24	$1,593,886.24	$1,593,886.24	$1,593,886.24	$1,593,886.24	$1,593,886.24	$1,593,886.24
Polling Place Scanner (PPS)	3,500	$1,498,522.62	$997,483.41	$997,483.41	$997,483.41	$997,483.41	$997,483.41	$997,483.41	$997,483.41
Central Scanning Device (CSD)	165	$67,656.75	$47,514.69	$47,514.69	$47,514.69	$47,514.69	$47,514.69	$47,514.69	$47,514.69
TOTAL:		$4,962,591.75	$3,638,884.34	$3,638,884.34	$3,638,884.34	$3,638,884.34	$3,638,884.34	$3,638,884.34	$3,638,884.34
								TOTAL:	**$30,434,782.13**

eRFP	47800-SOS0000037
Vendor	Dominion Voting

Assume No Stock on Hand

Provide pricing for one Extra Large Sized County to provide Consumables for 200,000 ballots	**Qty**	**Qty Required**	**Price Per Unit 2020**	**Total Price 2020**	**Price Per Unit increase (Fixed % or ≤ C.P.I.)**	**Total Price 2021**	**Total Price 2022**	**Total Price 2023**	**Total Price 2024**	**Total Price 2025**	**Total Price 2026**	**Total Price 2027**	**Total Price 2028**	**Total Price 2029**
Ballots - Absentee Ballot stock for internal printing	200,000	200,000	$0.13	$25,000.00	1.23%	$25,307.50	$25,618.78	$25,933.89	$26,252.88	$26,575.79	$26,902.67	$27,233.58	$27,568.55	$27,907.64
Other Paper (e.g. printer tapes)				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Ink				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables - BMD Card Stock			$0.10	$0.00	1.23%	$0.01	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
			TOTAL:	$25,000.00	**TOTAL:**	$25,307.51	$25,618.78	$25,933.89	$26,252.88	$26,575.79	$26,902.67	$27,233.58	$27,568.55	$27,907.64

Total:	$264,301.30	
Quantity	11	$2,907,314.27

Assume No Stock on Hand

Provide pricing for one Large Sized County to provide Consumables for 75,000 ballots	**Qty**	**Qty Required**	**Price Per Unit 2020**	**Total Price 2020**	**Price Per Unit increase (Fixed % or ≤ C.P.I.)**	**Total Price 2021**	**Total Price 2022**	**Total Price 2023**	**Total Price 2024**	**Total Price 2025**	**Total Price 2026**	**Total Price 2027**	**Total Price 2028**	**Total Price 2029**
Ballots - Absentee Ballot Stock for internal printing	75,000	75,000	$0.13	$9,375.00	1.23%	$9,490.31	$9,607.04	$9,725.21	$9,844.83	$9,965.92	$10,088.50	$10,212.59	$10,338.21	$10,465.37
Other Paper (e.g. printer tapes)				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Ink				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables - BMD Card Stock			$0.10	$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
			TOTAL:	$9,375.00	**TOTAL:**	$9,490.31	$9,607.04	$9,725.21	$9,844.83	$9,965.92	$10,088.50	$10,212.59	$10,338.21	$10,465.37

Total:	$99,112.98	
Quantity	41	$4,063,632.26

Assume No Stock on Hand

Provide pricing for one Medium Sized County to provide Consumables for 35,000 ballots	**Qty**	**Qty Required**	**Price Per Unit 2020**	**Total Price 2020**	**Price Per Unit increase (Fixed % or ≤ C.P.I.)**	**Total Price 2021**	**Total Price 2022**	**Total Price 2023**	**Total Price 2024**	**Total Price 2025**	**Total Price 2026**	**Total Price 2027**	**Total Price 2028**	**Total Price 2029**
Ballots - Absentee Ballot stock for internal printing	35,000	35,000	$0.13	$4,375.00	1.23%	$4,428.81	$4,483.29	$4,538.43	$4,594.25	$4,650.76	$4,707.97	$4,765.88	$4,824.50	$4,883.84
Other Paper (e.g. printer tapes)				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Ink				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables - BMD Card Stock			$0.10	$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
			TOTAL:	$4,375.00	**TOTAL:**	$4,428.81	$4,483.29	$4,538.43	$4,594.25	$4,650.76	$4,707.97	$4,765.88	$4,824.50	$4,883.84

Total:	$46,252.72	
Quantity	50	$2,312,636.25

Assume No Stock on Hand

Provide pricing for one Small Sized County to provide Consumables for 10,000 ballots	**Qty**	**Qty Required**	**Price Per Unit 2020**	**Total Price 2020**	**Price Per Unit increase (Fixed % or ≤ C.P.I.)**	**Total Price 2021**	**Total Price 2022**	**Total Price 2023**	**Total Price 2024**	**Total Price 2025**	**Total Price 2026**	**Total Price 2027**	**Total Price 2028**	**Total Price 2029**
Ballots - Absentee Ballot stock for internal printing	10,000	10,000	$0.13	$1,250.00	1.23%	$1,265.38	$1,280.94	$1,296.69	$1,312.64	$1,328.79	$1,345.13	$1,361.68	$1,378.43	$1,395.38
Other Paper (e.g. printer tapes)				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Ink				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables - BMD Card Stock			$0.10	$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
			TOTAL:	$1,250.00	**TOTAL:**	$1,265.38	$1,280.94	$1,296.69	$1,312.64	$1,328.79	$1,345.13	$1,361.68	$1,378.43	$1,395.38

Total:	$13,215.06	
Quantity	57	$753,258.66
TOTAL:	**159**	**$10,036,841.44**

Assume No Stock on Hand

Consumables for running one statewide election with 7 million ballots on the proposed SVS				**Notes**
	Qty	**Price Per Unit**	**Total Price**	
Ballots - BMD Ballot Stock	7,000,000	0.1	$700,000.00	Assume no spoilage
Other Paper (e.g. printer tapes)	TBD			
Ink	TBD			
- Absentee Ballot Stock for internal printing (10%)	700,000	0.13	$ 91,000.00	
Other Required Consumables	TBD			
Other Required Consumables	TBD			
Other Required Consumables	TBD			
		TOTAL:	$791,000.00	

47800-SOS0000037

Dominion Voting

Fill out all labor types applicable

Job Position	FTE, Supplier or Subcontractor Name	Hourly Rate During Implementation	Estimated Project Hours (through complete State rollout, installation of all equipment and training for all counties)	Cost Total
Project Director - Dominion Voting	Barry Herron, Nicole Nollette	$250.00	960	$240,000.00
Project Manager - Dominion Voting	Jason Frank	$250.00	2464	$616,000.00
Business Analyst - Dominion Voting	TBD			$0.00
Database Administrator - Dominion Voting	Jason Frank	$250.00		$0.00
Hardware Specialist - Dominion Voting	Tim Baumbach	$250.00	4992	$1,248,000.00
Programmer(s) Dominion Voting	Scott Tucker	$437.50	9336	$4,084,500.00
Quality Assurance Lead - Dominion Voting	Tim Baumbach	$250.00		$0.00
Security Architect - Dominion Voting	Jeremy Holck	$250.00		$0.00
Technical Lead - Dominion Voting	Jason Frank	$250.00	2088	$522,000.00
Test Lead - Dominion Voting	Darren Silverburg	$250.00	960	$240,000.00
Tester (s) - Dominion Voting; Subs Diversfied technologies, Easy Vote	TBD			$0.00
Training Lead/Manager - Dominion Voting	Cathi Smohers	$250.00	2496	$624,000.00
Training Specialist - Dominion Voting	Mitch Keddrell	$250.00		$0.00
Other (specify) - Warehouse, Depot Repair, Delivery, County Techs, Election Support Rovers, Help Desk	TBD	$187.50	3680	$690,000.00
			Total:	$8,264,500.00

Implementation and Training Cost for Full SVS	Unit Price (Specify Unit Type)	Units	Total Price
FTE's - (Labor Rates captured above)			$8,264,500.00
Project Management (if not included in Labor Rate above)	125	400	$50,000.00
Software Programming and Configuration (if not included in Labor Rate above)	225	200	$45,000.00
Application Interface Modeling and Development (if not included in Labor Rate above)	187.5	400	$75,000.00
Consulting (if not included in Labor Rate above)			$0.00
Travel (Estimated Using State Travel Per Diem and Travel Guidelines)			$0.00
Sub contractors (if not included in Labor Rate above)	**105.3**	4480	$471,744.00
Ballot building services for all elections through June 30, 2021			$0.00
Distribution cost: Warehouse, Acceptance, and Distribution	**105.3**	**20944**	$2,205,403.20
Election Day Support- State Level On Site	105.3	768	$80,870.40
Election Day Support- County Level On Site (Single County)	105.3	33224	$3,498,487.20
Election Day Support- State Level Remote			$0.00
Election Day Support- County Level Remote (Single County)			$0.00
Training Fees (if not included in Labor Rate above)	81000	1	$81,000.00
		TOTAL:	$6,507,504.80

eRFP	47800-SOS0000037
Vendor	Dominion Voting

RFP TOTAL COST ANALYSIS		
Cost Model		
	System Total	$93,527,614.80
	eRFP Total	**$93,527,614.80**
Sample (159 County Purchase)		
	System Total	$8,521,159.82
	Consumables Total	$10,036,841.44
	County Total	**$18,558,001.26**
	Total Cost Model:	**$112,085,616.06**
8 Years Post Warranty (County and State)		
	License Fees Total	$19,654,933.87
	Maintenance Fees Total	$30,434,782.13
7,000,000 Ballots (For Benchmark/Assessment Purpose Only)		
	Consumables Total	$791,000.00

eRFP	Revised - 47800-SOS0000037
Vendor	Dominion Voting

Systems	Qty	Price Per Unit 2021	Total Price 2021	Price Per Unit increase (Fixed % or ≤ C.P.I.)	Total Price 2022	Total Price 2023	Total Price 2024	Total Price 2025	Total Price 2026	Total Price 2027	Total Price 2028	Total Price 2029	Total Price 2030		
SAMPLE	100	$10.00	$1,000.00	1.23%	$1,012.30	$1,024.75	$1,037.36	$1,050.12	$1,063.03	$1,076.11	$1,089.34	$1,102.74	$1,116.31		
Ballot Marking Device - (Sample Purchase of 100)	100	$3,500.00	$350,000.00	1.23%	$354,305.00	$358,662.95	$363,074.51	$367,540.32	$372,061.07	$376,637.42	$381,270.06	$385,959.68	$390,706.99		
BMD Stand (if required)		$295.00	$295.00	1.23%	$298.63	$302.30	$306.02	$309.78	$313.59	$317.45	$321.36	$325.31	$329.31		
Privacy Shield/Solution (if required)		$15.00	$15.00	1.23%	$15.18	$15.37	$15.56	$15.75	$15.95	$16.14	$16.34	$16.54	$16.74		
Polling Place Scanner, Stand, and Ballot Box - (Sample Purchase of 100)	100	$4,900.00	$490,000.00	1.23%	$496,027.00	$502,128.13	$508,304.31	$514,556.45	$520,885.50	$527,292.39	$533,778.08	$540,343.55	$546,989.78		
Central Scanning Device		$7,500.00	$7,500.00	1.23%	$7,592.25	$7,685.63	$7,780.17	$7,875.86	$7,972.74	$8,070.80	$8,170.07	$8,270.56	$8,372.29		
CSD Stand (if required)					$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		
Poll Book - (Sample Purchase of 100)	100	$305.00	$30,500.00	1.23%	$30,875.15	$31,254.91	$31,639.35	$32,028.51	$32,422.46	$32,821.26	$33,224.96	$33,633.63	$34,047.32		
Peripheral Equipment (if required)		$302.50	$302.50	1.23%	$306.22	$309.99	$313.80	$317.66	$321.57	$325.52	$329.53	$333.58	$337.68		
Ballot on Demand		$5,800.00	$5,800.00	1.23%	$5,871.34	$5,943.56	$6,016.66	$6,090.67	$6,165.58	$6,241.42	$6,318.19	$6,395.90	$6,474.57		
Central Ballot Printing		$5,800.00	$5,800.00	1.23%	$5,871.34	$5,943.56	$6,016.66	$6,090.67	$6,165.58	$6,241.42	$6,318.19	$6,395.90	$6,474.57		
		TOTAL:	$890,212.50	**TOTAL:**	$901,162.11	$912,246.41	$923,467.04	$934,825.68	$946,324.04	$957,963.82	$969,746.78	$981,674.67	$993,749.26	**Total:**	**$8,521,159.82**

Georgia

Request for Clarification Response

May 24, 2019

Request for Proposal (RFP) Number: 47800-SOS0000037

Thank you for submitting a written proposal response and for participating in the system demonstrations. At this time, the solicitation status remains "under evaluation" of the technical responses and the State has determined a need for additional information. This opportunity to submit clarification, may reduce ambiguity; however, Suppliers should be advised that their technical scores may improve or decrease, as a result.

GENERAL INSTRUCTIONS

The Supplier should complete the attached documents:

- **Supplier Proposal Clarification Response Form**, provide a Clarification narrative for the questions listed along with a Demonstration video narrative to show how the solution meets the proposal description for the questions.
- **Demonstration Video**, submit one video that is no longer than 90 minutes in total, that highlights the capabilities of the Proposed SVS. Please use the Demonstration outline.

- **Cost Proposal Clarification,** to remove the potential for error in miscalculation and for a narrative of cost assumptions that does not include pricing.

- **Contract Exceptions Clarification Form,** indicate only the contract terms that are absolutely necessary to be able to accept the SVS project if determined to be the top bidder.

It is highly recommended that the Supplier carefully and completely read the RFP and its supporting documents, in its entirety, prior to completing this form.

This clarification is intended to allow the Supplier to provide a detailed narrative, where applicable, that describes its approach to meeting the groups of requirements, indicated below. Because of the length and complexity of this RFP the Department requires that a complete response for each Response Statement be incorporated in the space provided below, unless otherwise instructed. The Supplier should not refer the evaluator to content in other sections as a means to satisfy RFP requirements, even if that means repeating the same content. Mere reiterations of RFP activities, tasks, and requirements are strongly discouraged, as they will **not** provide insight into the Supplier's ability to completely meet the requirements included in the RFP. The Supplier's responses should be concise and provide a proposed approach that meet the requirements outlined. Please list information that is proprietary.

Georgia

TECHNICAL PROPOSAL CLARIFICATION INSTRUCTIONS

1. By no later than 3:00 p.m. on June 3, 2019, provide the clarification to the technical proposal which may include the information shared during demonstrations.

2. Insert the original technical response to each question without changes then immediately follow the original response with any clarifying information. The clarification response should be concise and specific.

   Ex. "The technical response intends to clarify the intent to deliver services within the time commitment prescribed by SOS."

PLEASE DO NOT INCLUDE COSTS WITHIN THE TECHNICAL RESPONSE

COST PROPOSAL CLARIFICATION INSTRUCTIONS:

3. Complete the new cost sheet, inserting the original cost response, without adding additional columns or cells.

4. Provide a written narrative that describes the approach, assumptions and/or methodology utilized for developing the cost proposal. Please use cross references to the technical proposal or demonstrations (if applicable). Apply any discounts proposed within the cost model, within a narrative. Please label the document "Approach to Cost Proposal - Narrative".

   Ex. "This expense is identified for a full-time project manager, as described in section ...."

Be reminded that failure to return the materials in the specified timeframe will result in consideration of the Suppliers last submission without modification as being final. This may also result in removal from further consideration.

Thank you again for your interest in providing solutions to the State of Georgia.

Ms. Verneicher Favors

Georgia Secretary of State

Signature of Authorized Representative

May 28, 2019
Date

John Poulos, President and CEO
Name and Title

DOMINION VOTING

1201 18TH STREET, SUITE 210 DENVER, CO 80202

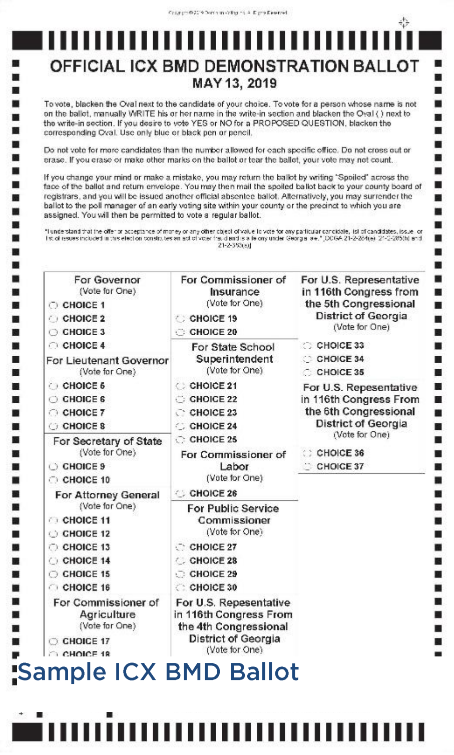
June 3, 2019

Verneicher Favors, GCPM, GCPCA
Agency Procurement Officer
Georgia Secretary of State

Dear Ms. Favors,

Please accept Dominion's submission for the Request for Clarification Response dated May 24, 2019, Request for Proposal (RFP) Number 47800-SOS0000037. Attached you will find our written Supplier Proposal Clarification Response Form, our Demonstration Video, our Cost Proposal Clarification and Contract Exceptions Clarification Form.

We certainly hope the explanations provided assist the committee in understanding better Dominion's Proposal for the State of Georgia's new Voting System and our robust Implementation Plan associated with such procurement. We are excited that Dominion is moving closer to providing an option for our customers by offering either the BMD ballot with a bar code as submitted or a BMD full-size ballot printed, thereby eliminating a bar code recapping the voter's choices. The ballot looks exactly like the paper ballots voted by mail-in absentee voters or voters that elect to vote a hand marked paper ballot at the polls. Please refer to Question 16.1 of our submission for additional information.



OFFICIAL ICX BMD DEMONSTRATION BALLOT
MAY 13, 2019

To vote, blacken the Oval next to the candidate of your choice. To vote for a person whose name is not on the ballot, manually WRITE his or her name in the write-in section and blacken the Oval ( ) next to the write-in section. If you desire to vote YES or NO for a PROPOSED QUESTION, blacken the corresponding Oval. Use only blue or black pen or pencil.

Do not vote for more candidates than the number allowed for each specific office. Do not cross out or erase. If you erase or make other marks on the ballot or tear the ballot, your vote may not count.

If you change your mind or make a mistake, you may return the ballot by writing "Spoiled" across the face of the ballot and return envelope. You may then mail the spoiled ballot back to your county board of registrars, and you will be issued another official absentee ballot. Alternatively, you may surrender the ballot to the poll manager of an early voting site within your county or the precinct to which you are assigned. You will then be permitted to vote a regular ballot.

"I understand that the offer or acceptance of money or any other object of value to vote for any particular candidate, list of candidates, issue, or list of issues included in this election constitutes an act of voter fraud and is a felony under Georgia law." (OCGA 21-2-284(e), 21-2-285(h) and 21-2-383(a))

For Governor
(Vote for One)
○ CHOICE 1
○ CHOICE 2
○ CHOICE 3
○ CHOICE 4

For Lieutenant Governor
(Vote for One)
○ CHOICE 5
○ CHOICE 6
○ CHOICE 7
○ CHOICE 8

For Secretary of State
(Vote for One)
○ CHOICE 9
○ CHOICE 10

For Attorney General
(Vote for One)
○ CHOICE 11
○ CHOICE 12
○ CHOICE 13
○ CHOICE 14
○ CHOICE 15
○ CHOICE 16

For Commissioner of Agriculture
(Vote for One)
○ CHOICE 17
○ CHOICE 18

For Commissioner of Insurance
(Vote for One)
○ CHOICE 19
○ CHOICE 20

For State School Superintendent
(Vote for One)
○ CHOICE 21
○ CHOICE 22
○ CHOICE 23
○ CHOICE 24
○ CHOICE 25

For Commissioner of Labor
(Vote for One)
○ CHOICE 26

For Public Service Commissioner
(Vote for One)
○ CHOICE 27
○ CHOICE 28
○ CHOICE 29
○ CHOICE 30

For U.S. Repesentative in 116th Congress From the 4th Congressional District of Georgia
(Vote for One)

For U.S. Representative in 116th Congress from the 5th Congressional District of Georgia
(Vote for One)
○ CHOICE 33
○ CHOICE 34
○ CHOICE 35

For U.S. Repesentative in 116th Congress From the 6th Congressional District of Georgia
(Vote for One)
○ CHOICE 36
○ CHOICE 37

Sample ICX BMD Ballot

As you are aware, attached to the Spreadsheet for Clarifications, was a spreadsheet tab named "Pivot Table". The tab appears to be a scoring sheet of sorts with comments about each vendor's system. Unfortunately, several comments we could attribute to Dominion's system or proposal do not accurately reflect the features inherent in our system when compared to the requirements set forth in the RFP. Although we are not clear on why this table was distributed at this point of the procurement process, we are compelled to request an opportunity to address such noted comments if they are in fact being used as part of the evaluation process, to allow the committee to make an informed decision.

We look forward to the next steps in the evaluation process. We stand ready to meet in-person to answer any remaining questions and to restate our claim that Dominion offers the best overall solution and partnership for the next twenty (20) years.

As President and CEO, I am authorized to commit Dominion to the terms of this response. I further authorize Barry Herron, our Regional Sales Manager and/or Waldeep Singh, our Executive Vice President of Sales, to represent the Dominion in any negotiations regarding this RFP.

Barry can be reached as follows: Phone (419) 350-8455 email: barry.herron@dominionvoting.com Mail: 1201 18th Street Suite 210, Denver, CO 80202	Waldeep can be reached as follows: Phone (916) 803-6769 email: waldeep.singh@dominionvoting.com Mail: 1555 Doolittle Dr., Suite 110, San Leandro, CA 94577

Sincerely,

John Poulos, President and CEO
Dominion Voting Systems, Inc.
Phone (866) 654-8683
Email: john.poulos@dominionvoting.com

ATTACHMENT V Clarification

CONTRACT EXCEPTION FORM

Page Number	Contract Section Number	Item	CONTRACT EXCEPTION
3	2.1.2	Additional Products and Services	Reject [ ]; Accept if modified [X] as follows: Scheduled State certified upgrades to Software will be provided at no additional charge to the State Entities as part of the license terms. The Software shall comply with the State of Georgia certification requirements and election laws in effect as of the date the Software is certified by the State of Georgia. This provision applies to the initially installed Software as well as any subsequent upgrades provided by Dominion. Additional hardware or services can be provided at mutually agreeable pricing.
4	2.1.6	Inspection	Reject [ ]; Accept if modified [X] as follows: Definition of Standard Liquidated Damages should be reviewed and negotiated between the parties in the context of the entire Agreement framework.
4	2.1.7	Cancellation of Solution Order for Convenience	Reject [ ]; Accept if modified [X] as follows: The State or State Entity shall pay for any part of the Solution provided by the Contractor, prior to the effective date of the termination under this provision.
4	2.3	Revisions; Upgraded Solution	Reject [ ]; Accept if modified [X] as follows: Scheduled State certified upgrades to Software will be provided at no additional charge to the State Entities as part of the license terms. The Software shall comply with the State of Georgia certification requirements and election laws in effect as of the date the Software is certified by the State of Georgia. This provision applies to the initially installed Software as well as any subsequent upgrades provided by Dominion. Additional hardware or services can be provided at mutually agreeable pricing.
5	2.5	Interoperability; Integration	Reject [ ]; Accept if modified [X] as follows: Dominion requires further information and detail regarding this requirement and in particular, whether it is feasible in the context of EAC certification, which is required in other sections of the Agreement.
6	3	License and Authorized Use	Reject [ ]; Accept if modified [X] as follows: Terms related to License and Authorized Use should be reviewed and negotiated between the parties in the context of the entire Agreement framework. Without limitation, the provided licenses are not perpetual or irrevocable; while software can be installed and uninstall it cannot be “deactivated” at a component level, and source code will be provided as part of an escrow agreement with the State, which shall include licensed intellectual property release terms related to bankruptcy.

8	4.3	Extended Warranty	Reject [ ]; Accept if modified [X] as follows: Dominion does not provide remote or hosted assistance and the voting systems are closed systems, not connected to the Internet.
9	5.5	Limits on Discretion	Reject [ ]; Accept if modified [X] as follows: Terms related to the reasonableness of a Change Order request should be reviewed and negotiated between the parties in the context of the entire Agreement framework.
11	6.3	State Review and Acceptance	Reject [ ]; Accept if modified [X] as follows: Delete first sentence of the Section.
11	6.4	Project Managers	Reject [ ]; Accept if modified [X] as follows: Delete “At State’s election”
11	6.7	Subcontractors; Ineligible Status	Reject [ ]; Accept if modified [X] as follows: Consent shall not be unreasonable withheld.
12	7.2	SSAE 18 Reporting	Reject [ ]; Accept if modified [X] as follows: This section will need additional review to ensure compliance with Dominion’s security guidelines, as well as confidential and proprietary information.
14	8.2.1	Non-Conformance – Generally	Reject [ ]; Accept if modified [X] as follows: Delete last sentence of the Section.
14	8.2.2	Software	Reject [ ]; Accept if modified [X] as follows: This provision will require further discussion to take into account voting system security and State of Georgia certification process.
15	8.4	Proactive Monitoring	Reject [ ]; Accept if modified [X] as follows: Monitoring should be limited to a project basis, not “overall.” In addition, Dominion would like to review and negotiate the scope of this provision with the State.
15	8.5	Coding Standards	Reject [ ]; Accept if modified [X] as follows: The Deliverables will not be "work for hire" or "work product" and instead will be State of Georgia certified software and firmware that is owned by Dominion and licensed for use to the State and State Entities. Dominion’s proprietary source code remains part of Dominion’s intellectual property.
16	9	Delivery and Acceptance	Reject [ ]; Accept if modified [X] as follows: References to customized deliverable need to be deleted as the delivered Solution will be the State of Georgia certified voting system.
17	10.1.2	Equipment Charges	Reject [ ]; Accept if modified [X] as follows: Dominion would like to review with the State to improve the efficiency of this provision.
17	10.2	Events Affecting Milestone Payments	Reject [ ]; Accept if modified [X] as follows: Milestone Payments should be reviewed and negotiated between the parties in the context of the entire Agreement framework.
17	10.5	Currency; Settlement Method	Reject [ ]; Accept if modified [X] as follows: Dominion would like to review with the State to improve the efficiency of this provision and suggest wire transfer as an alternative.
17	10.6	State Status as Most Favored Customer	Reject [ ]; Accept if modified [X] as follows: Most Favored Customer status should be reviewed and negotiated between the parties in the context of the entire Agreement framework.
18	10.10	Audit	Reject [ ]; Accept if modified [X] as follows: Dominion will provide controlled-access to any offices desired by the State of Georgia, assuming auditors meet our security clearance requirements. Access to materials is also possible with appropriate notice and security clearance. Audits will be conducted under Dominion Security guidelines which prohibit use of cameras, video or audio recordings. We will make

			every effort to support the information requests of auditing staff. In addition, Dominion would like to review and negotiate the scope of this provision with the State.
21	11.7	Data and Network Security	Reject [ ]; Accept if modified [X] as follows: Dominion does not have general objections to this section but would like an opportunity to review in further detail with the State. It is important to note that Dominion's election management and tabulation systems are closed systems, not connected to the Internet.
22	11.8	Disaster Recovery – Requirements and Audit Procedure	Reject [ ]; Accept if modified [X] as follows: Dominion would like an opportunity to review in further detail with the State, in particular, regarding scope. It is important to note that Dominion's election management and tabulation systems are closed systems, not connected to the Internet.
24	12.7	Deliverables	Reject [ ]; Accept if modified [X] as follows: The Deliverables will not be "work for hire" or "work product" and instead will be State of Georgia certified software and firmware that is owned by Dominion and licensed for use to the State and State Entities. Dominion's proprietary source code remains part of Dominion's intellectual property.
27	15.1.8	EAC Certification	Reject [ ]; Accept if modified [X] as follows: This section assumes a possible de-certification resulting from an "offending component." Decertification can result from other third-party factors completely out of Dominion's control and not a result of any issue with the Solution. Therefore, Dominion would like to discuss this section further as part of the overall contract negotiations.
28	15.1.12	Solutions and other Deliverables	Reject [ ]; Accept if modified [X] as follows: The Deliverables will not be "work for hire" or "work product" and instead will be State of Georgia certified software and firmware that is owned by Dominion and licensed for use to the State and State Entities. Dominion's proprietary source code remains part of Dominion's intellectual property. Dominion, not the State, may make customized changes to the Solution, which will require recertification prior to installation.
28	15.1.13	Compliance with Regulation	Reject [ ]; Accept if modified [X] as follows: Dominion requires further clarity regarding the State's intent related to this section.
29	16	Indemnification	Reject [ ]; Accept if modified [X] as follows: Dominion requests that further limits are added to the Indemnification provisions, including without limitation, excepting liabilities caused solely by the negligence or willful misconduct of any Indemnitee, and the inclusion of a limitation of liability provision.
30	17	Term and Termination	Reject [ ]; Accept if modified [X] as follows: Term and Termination provision affect all aspects of the Agreement and should be reviewed and negotiated between the parties in the context of the entire Agreement framework.

eRFP Proposal for the Georgia Secretary of State
2019
eRFP Name
Statewide Voting System
eRFP Number
47800-SOS0000037
Vendor Name
Dominion Voting
Vendor Address
1201 18th Street, Suite 210
Denver, Colorado 80202
Vendor Point of Contact and Contact Information
Barry Herron
barry.herron@dominionvoting.com
419-350-8455

eRFP	47800-SOS0000037
Vendor	Dominion Voting

The purpose of the Cost Model for this eRFP is to provide a fixed price fee structure for initial purchase and a total cost of ownership for a yen (10) year period so that the Suppliers' responses can be compared equitably. **At a minimum**, each Supplier should provide the details for the line items requested for: the initial purchase requirements, installation, cost through December 31, 2021 as covered in the warranty period, and the remaining costs for the ten (10) year term of the contract.

Each Supplier is encouraged to supplement this pricing information with additional details as a separate worksheet and/or line items to demonstrate a fully loaded cost. Pricing information should support and demonstrate the ability to cover all costs associated with the requirements and as detailed in your responses to the Mandatory Scored Questions.

Note that the Cost Model Evaluation will include the initial ten (10) year term of the contract to ensure that the interest of the counties is represented in the proposal and for them to budget for future years. The initial cost through December 31, 2021 to fully purchase, distribute, implement, and train all GASOS employees and counties (fully loaded) will be considered under and constrained by the budget proposal as defined by the Georgia General Assembly.

The initial cost through December 31, 2021 to fully purchase, distribute, implement, and train all GASOS employees and counties (fully loaded) will be constrained by the budget proposal as defined by the Georgia General Assembly.

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Vendor	Dominion Voting
	eRFP
	This section will be used to capture the total contract cost for the initial equipment purchase, implementation, and training and will be included in the Cost Model Calculation.
	Post Warranty
	After the initial purchase and two year initial warranty period through December 31, 2021, the state and counties will need details for the additional cost to support the software via software and licensing fees and all equipment through applicable additional maintenance and warranty costs. This worksheet is to provide these details and will be included in the Cost Model Calculations.
	County Purchases
	After the initial purchase and two year initial warranty period through December 31, 2021, counties will need details for the additional cost for consumables to support elections for counties of various sizes. The cost model includes four sections to capture the cost for extra large counties (200,000 ballots), large counties (75,000 ballots), medium counties (35,000 ballots) and small counties (10,000 ballots) to be included in the Cost Model Calculations. There is an additional section for reference only that will be used as check sum and data point for consumables to support an election with 7,000,0000 ballots and will not be included in the Cost Model Calculations.
	Implementation Worksheet
	This worksheet is to be used to show your detailed implementation costs and will be a subset of the total of your implementation costs as captured in the eRFP tab. This worksheet will not be included in the Cost Model Calculations except as an item in the eRFP tab and line item total.
	Cost Calcs
	The Supplier is to provide no information on this tab, it is to be calculated from the populated sections covered. The Supplier should confirm and check that the totals from the individual worksheets are accurately reflected.
	Additional Products and Services
	This worksheet will be used to capture future equipment purchases that may be independently made and pricing that could be used to create a Contract MSLA and will not be included in the Cost Model Calculations.

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SVS components included in the eRFP	Qty	Price Per Unit	Total Price	Notes
Election Management System (EMS) - Software & Hardware	1	$834,673.35	$834,673.35	All components needed for operation at state level and 159 counties
Electronic Poll Bool Management System (EPDMS) - Software & Hardware	1	$30,000.00	$30,000.00	All components needed for operation at state level and 159 counties
Electronic Poll Book (EPoll)	8,000	$997.75	$7,982,000.00	All components needed for operation
Ballot Marking Device (BMD) (with ability to stand and provide privacy)	30,050	$2,016.17	$60,585,908.50	All components needed for operation
Polling Place Scanner (PPS) and Ballot Box	3,500	$2,430.36	$8,506,260.00	All components needed for operation
Central Scanning Device (CSD)	165	$4,950.11	$816,768.15	All components needed for operation
Implementation and Training Cost	1	$14,772,004.80	$14,772,004.80	All services needed for full implementation (Use Implementation Worksheet for Detail)
		TOTAL:	**$93,527,614.80**	

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Vendor	Dominion Voting

Post Warranty Cost

Item Description		Annual Software License and Support							
	Units	2022	2023	2024	2025	2026	2027	2028	2029
Election Management System (EMS)	1	$190,500.00	$190,500.00	$190,500.00	$190,500.00	$190,500.00	$190,500.00	$190,500.00	$190,500.00
Electronic Poll Bool Management System (EPDMS)	1								
Electronic Poll Book (EPoll)	8,000	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Ballot Marking Device (BMD)	30,050	$2,319,108.75	$1,660,342.25	$1,660,342.25	$1,660,342.25	$1,660,342.25	$1,660,342.25	$1,660,342.25	$1,660,342.25
Polling Place Scanner (PPS)	3,500	$410,571.00	$293,636.60	$293,636.60	$293,636.60	$293,636.60	$293,636.60	$293,636.60	$293,636.60
Central Scanning Device (CSD)	165	$287,605.50	$205,113.81	$205,113.81	$205,113.81	$205,113.81	$205,113.81	$205,113.81	$205,113.81
TOTAL:		$3,207,785.25	$2,349,592.66	$2,349,592.66	$2,349,592.66	$2,349,592.66	$2,349,592.66	$2,349,592.66	$2,349,592.66
								TOTAL:	**$19,654,933.87**

Item Description		Annual Hardware Maintenance Fees							
	Units	2022	2023	2024	2025	2026	2027	2028	2029
Electronic Poll Book (EPoll)	8,000	$1,000,000.00	$1,000,000.00	$1,000,000.00	$1,000,000.00	$1,000,000.00	$1,000,000.00	$1,000,000.00	$1,000,000.00
Ballot Marking Device (BMD)	30,050	$2,396,412.38	$1,593,886.24	$1,593,886.24	$1,593,886.24	$1,593,886.24	$1,593,886.24	$1,593,886.24	$1,593,886.24
Polling Place Scanner (PPS)	3,500	$1,498,522.62	$997,483.41	$997,483.41	$997,483.41	$997,483.41	$997,483.41	$997,483.41	$997,483.41
Central Scanning Device (CSD)	165	$67,656.75	$47,514.69	$47,514.69	$47,514.69	$47,514.69	$47,514.69	$47,514.69	$47,514.69
TOTAL:		$4,962,591.75	$3,638,884.34	$3,638,884.34	$3,638,884.34	$3,638,884.34	$3,638,884.34	$3,638,884.34	$3,638,884.34
								TOTAL:	**$30,434,782.13**

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Assume No Stock on Hand

Provide pricing for one Extra Large Sized County to provide Consumables for 200,000 ballots	Qty	Qty Required	Price Per Unit 2020	Total Price 2020	Price Per Unit increase (Fixed % or ≤ C.P.I.)	Total Price 2021	Total Price 2022	Total Price 2023	Total Price 2024	Total Price 2025	Total Price 2026	Total Price 2027	Total Price 2028	Total Price 2029
Ballots	200,000	200,000	$0.13	$26,000.00	1.23%	$26,319.80	$26,643.53	$26,971.25	$27,303.00	$27,638.82	$27,978.78	$28,322.92	$28,671.29	$29,023.95
Other Paper (e.g. printer tapes)				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Ink				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
			TOTAL:	$26,000.00	**TOTAL:**	$26,319.80	$26,643.53	$26,971.25	$27,303.00	$27,638.82	$27,978.78	$28,322.92	$28,671.29	$29,023.95

Total:	$274,873.34	
Quantity	11	$3,023,606.70

Assume No Stock on Hand

Provide pricing for one Large Sized County to provide Consumables for 75,000 ballots	Qty	Qty Required	Price Per Unit 2020	Total Price 2020	Price Per Unit increase (Fixed % or ≤ C.P.I.)	Total Price 2021	Total Price 2022	Total Price 2023	Total Price 2024	Total Price 2025	Total Price 2026	Total Price 2027	Total Price 2028	Total Price 2029
Ballots	75,000	75,000	$0.13	$9,750.00	1.23%	$9,869.93	$9,991.33	$10,114.22	$10,238.62	$10,364.56	$10,492.04	$10,621.09	$10,751.73	$10,883.98
Other Paper (e.g. printer tapes)				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Ink				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
			TOTAL:	$9,750.00	**TOTAL:**	$9,869.93	$9,991.33	$10,114.22	$10,238.62	$10,364.56	$10,492.04	$10,621.09	$10,751.73	$10,883.98

Total:	$103,077.50	
Quantity	41	$4,226,177.55

Assume No Stock on Hand

Provide pricing for one Medium Sized County to provide Consumables for 35,000 ballots	Qty	Qty Required	Price Per Unit 2020	Total Price 2020	Price Per Unit increase (Fixed % or ≤ C.P.I.)	Total Price 2021	Total Price 2022	Total Price 2023	Total Price 2024	Total Price 2025	Total Price 2026	Total Price 2027	Total Price 2028	Total Price 2029
Ballots	35,000	35,000	$0.13	$4,550.00	1.23%	$4,605.97	$4,662.62	$4,719.97	$4,778.02	$4,836.79	$4,896.29	$4,956.51	$5,017.48	$5,079.19
Other Paper (e.g. printer tapes)				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Ink				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
			TOTAL:	$4,550.00	**TOTAL:**	$4,605.97	$4,662.62	$4,719.97	$4,778.02	$4,836.79	$4,896.29	$4,956.51	$5,017.48	$5,079.19

Total:	$48,102.83	
Quantity	50	$2,405,141.70

Assume No Stock on Hand

Provide pricing for one Small Sized County to provide Consumables for 10,000 ballots	Qty	Qty Required	Price Per Unit 2020	Total Price 2020	Price Per Unit increase (Fixed % or ≤ C.P.I.)	Total Price 2021	Total Price 2022	Total Price 2023	Total Price 2024	Total Price 2025	Total Price 2026	Total Price 2027	Total Price 2028	Total Price 2029
Ballots	10,000	10,000	$0.13	$1,300.00	1.23%	$1,315.99	$1,332.18	$1,348.56	$1,365.15	$1,381.94	$1,398.94	$1,416.15	$1,433.56	$1,451.20
Other Paper (e.g. printer tapes)				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Ink				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
			TOTAL:	$1,300.00	**TOTAL:**	$1,315.99	$1,332.18	$1,348.56	$1,365.15	$1,381.94	$1,398.94	$1,416.15	$1,433.56	$1,451.20

Total:	$13,743.67	
Quantity	57	$783,389.01
TOTAL:	**159**	**$10,438,314.96**

Assume No Stock on Hand

Consumables for running one statewide election with 7 million ballots on the proposed SVS				Notes
	Qty	Price Per Unit	Total Price	
Ballots	7,000,000	0.1	700000	BMD stock
Other Paper (e.g. printer tapes)	TBD			
Ink	TBD			
Other Required Consumables	700,000	0.13	91000	10% absentee printed in house
Other Required Consumables	TBD			
Other Required Consumables	TBD			
Other Required Consumables	TBD			
		TOTAL:	$791,000.00	

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Dominion Voting

Fill out all labor types applicable

Job Position	FTE, Supplier or Subcontractor Name	Hourly Rate During Implementation	Estimated Project Hours (through complete State rollout, installation of all equipment and training for all counties)	Cost Total
Project Director	Barry Herron, Nicole Nollette	$250.00	960	$240,000.00
Project Manager	Jason Frank	$250.00	$2,464.00	$616,000.00
Business Analyst	TBD			$0.00
Database Administrator	Jason Frank	$250.00		$0.00
Hardware Specialist	Tim Baumbach	$250.00	$4,992.00	$1,248,000.00
Programmer	Cathi Smothers, Scott Tucker	$437.50	$9,336.00	$4,084,500.00
Quality Assurance Lead	Tim Baumbach	$250.00		$0.00
Security Architect	Jeremy Holck, Kay Stimson	$250.00		$0.00
Technical Lead	Jason Frank	$250.00	$2,088.00	$522,000.00
Test Lead	Darren Silverburg	$250.00	$960.00	$240,000.00
Tester	TBD - Subcontractors			$0.00
Training Lead/Manager	Cathi Smothers	$250.00	$2,496.00	$624,000.00
Training Specialist	Mitch Keddrell	$250.00		$0.00
Other (specify)	TBD - Several catagories	$187.50	$3,680.00	$690,000.00
			Total:	$8,264,500.00

Implementation and Training Cost for Full SVS	Unit Price (Specify Unit Type)	Units	Total Price
FTE's - (Labor Rates captured above)			$8,264,500.00
Project Management (if not included in Labor Rate above)	125	400	$50,000.00
Software Programming and Configuration (if not included in Labor Rate above)	225	200	$45,000.00
Application Interface Modeling and Development (if not included in Labor Rate above)	187.5	400	$75,000.00
Consulting (if not included in Labor Rate above)			$0.00
Travel (Estimated Using State Travel Per Diem and Travel Guidelines)			$0.00
Sub contractors (if not included in Labor Rate above)	**105.3**	4480	$471,744.00
Ballot building services for all elections through June 30, 2021	105.3	20944	$2,205,403.20
Distribution cost: Warehouse, Acceptance, and Distribution			$0.00
Election Day Support- State Level On Site	105.3	768	$80,870.40
Election Day Support- County Level On Site (Single County)	105.3	33224	$3,498,487.20
Election Day Support- State Level Remote			$0.00
Election Day Support- County Level Remote (Single County)			$0.00
Training Fees (if not included in Labor Rate above)	81000	1	$81,000.00
		TOTAL:	$6,507,504.80

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RFP TOTAL COST ANALYSIS

Cost Model		
	System Total	$93,527,614.80
	eRFP Total	**$93,527,614.80**
Sample (159 County Purchase)		
	System Total	$8,332,470.75
	Consumables Total	$10,438,314.96
	County Total	**$18,770,785.71**
	Total Cost Model:	**$112,298,400.51**
8 Years Post Warranty (County and State)		
	License Fees Total	$19,654,933.87
	Maintenance Fees Total	$30,434,782.13
7,000,000 Ballots (For Benchmark/Assessment Purpose Only)		
	Consumables Total	$791,000.00

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Systems	Qty	Price Per Unit 2021	Total Price 2021	Price Per Unit increase (Fixed % or ≤ C.P.I.)	Total Price 2022	Total Price 2023	Total Price 2024	Total Price 2025	Total Price 2026	Total Price 2027	Total Price 2028	Total Price 2029	Total Price 2030		
SAMPLE	100	$10.00	$1,000.00	1.23%	$1,012.30	$1,024.75	$1,037.36	$1,050.12	$1,063.03	$1,076.11	$1,089.34	$1,102.74	$1,116.31		
Ballot Marking Device - (Sample Purchase of 100)	100	$3,500.00	$350,000.00	1.23%	$354,305.00	$358,662.95	$363,074.51	$367,540.32	$372,061.07	$376,637.42	$381,270.06	$385,959.68	$390,706.99		
BMD Stand (if required)		$295.00	$0.00	1.23%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		
Privacy Shield/Solution (if required)		$15.00	$0.00	1.23%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		
Polling Place Scanner, Stand, and Ballot Box - (Sample Purchase of 100)	100	$4,900.00	$490,000.00	1.23%	$496,027.00	$502,128.13	$508,304.31	$514,556.45	$520,885.50	$527,292.39	$533,778.08	$540,343.55	$546,989.78		
Central Scanning Device		$7,500.00	$0.00	1.23%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		
CSD Stand (if required)			$0.00	1.23%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		
Poll Book - (Sample Purchase of 100)	100	$305.00	$30,500.00	1.23%	$30,875.15	$31,254.91	$31,639.35	$32,028.51	$32,422.46	$32,821.26	$33,224.96	$33,633.63	$34,047.32		
Peripheral Equipment (if required)		$302.00	$0.00	1.23%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		
Ballot on Demand		$5,800.00	$0.00	1.23%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		
Central Ballot Printing		$5,800.00	$0.00	1.23%	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		
		TOTAL:	$870,500.00	**TOTAL:**	$881,207.15	$892,046.00	$903,018.16	$914,125.29	$925,369.03	$936,751.07	$948,273.11	$959,936.86	$971,744.09	**Total:**	**$8,332,470.75**

Pricing Narrative

Form: eRFP Proposal for the Georgia Secretary of State, 2019

We corrected the cell number for Barry Herron.

Form: eRFP Pricing

This schedule contains in its entirety all the equipment, software and services specified in the RFP.

The Election Management System (EMS) includes statewide licenses for the Democracy Suite modules to build the ballots for all 159 counties, tabulate and report the results for all 159 counties and to export county results to the State; statewide Adjudication modules to allow each county to electronically adjudicate (eliminate manual duplication of ballots) all ballots scanned each election and to provide the basis for auditing of results post-election; statewide Test Deck modules permitting the counties to produce internally test decks for L&A testing each election; and finally statewide licenses for UOCAVA ballots to process remote ballots without the need to duplicate ballots manually. The price as shown also includes 4 main servers for the State, 171 Client servers for the State and each County and 183 Adjudication servers for the State and each County. The larger counties have been allotted multiple Client and Adjudication servers due to the volume of absentee ballots received.

The schedule includes the ePoll Book Statewide Software License and 8,000 poll pads including all accessories required to operate in each polling site.

Next is listed the 30,050 ICX BMD (Ballot Marking Devices) devices required including 30,050 Privacy Voting Booths; 30,050 ICX Carry Cases; 30,050 BMD Carry Cases; 2,754 ATI ADA kits with Braille touch pad and headsets; and 2,913 UPS battery backup units for each polling site plus spares for the rovers on election day. All voter access smart cards, poll worker smart cards and technician smart cards are included.

The schedule includes 3,500 Polling Place Scanners, the ICP, with its plastic ballot box and security lid along with paper rolls and seals for elections in 2019 and 2020.

The 165 Central Scanning Devices – 20 model G1130 for the larger counties and 145 M160ii scanners for the remaining counties statewide. These table top scanners are very easy to operate and take up little space in the courthouse. The counties will be able to scan absentee and UOCAV ballots efficiently while adjudicating ballots electronically.

Lastly, but vitally important to the success of the project is the Implementation and Training Cost item. Details of the plan will be discussed in the narrative to follow.

Form: Post Warranty

The Post Warranty schedule discloses the annual license, firmware and extended warranty fees due for the remaining 8 years after the initial two-year warranty expires. The schedule is self-explanatory.

Form: County Purchases

In the original RFP, this schedule asks for costs to print absentee ballots internally in each county and Dominion disclosed the price of blank ballot stock for each county to print absentee ballots internally. Since the designation of internal absentee printing was eliminated from the description line, the intention may be to have the vendors supply a price for commercially printed ballots. Dominion is not a ballot printer, but has partners that are and if printed commercially, the prices would be very competitive but higher than blank ballot stock as quoted in the form. The formulas changed that are embedded in the schedule, thus the total cost shown is slightly different than the original submission.

We quoted blank ballot stock pricing for internally printing of absentee ballot consistent with our original submission. Many of the counties have BOD printers now used for printing absentee ballots. Depending on the model of printer, Dominion ballots can be printed in house as there are now. The counties should purchase Dominion's Remote Ballot Printing module with a new OKI printer. Over 10-year cost of ownership, that solution represents a significant savings compared to having the absentee ballots printed commercially over the same 10-year period. Dominion will be happy to provide the information to support that statement.

For the price of 7,000,000 ballots, we used the BMD blank stock price and estimated absentee ballots to be approximately 10% or 700,000 statewide and used that quantity at the blank ballot stock pricing.

As for other consumables such as PPS paper rolls, 14,000 rolls are included with the system. BMD ink cartridges have a life of over 3,000 ballots printed per device. The original ink cartridge will last for 20 or more elections before needing to be replaced at the rate of 150 votes per election on a single device. The ICP lithium batteries have a 5-year life. Year 6 the batteries should be replaced. The ICX lithium batteries also have a 5-year life. Year 6 the ICX batteries should be replaced. These costs are not included in the County Purchases tab because they were not included in the original submission. Dominion will be happy to provide that information if requested.

Form: Implementation Worksheet

The comprehensive Implementation Plan was constructed in a tried and proven manner by Dominion and our experienced subcontractors that have implemented multiple statewide voting systems over the last 15 to 16 years. The Dominion staff and subcontractor experience include the statewide roll out in Georgia in 2002 many of us participated in.

The plan identifies all known risk factors and has mitigation procedures in place as an issue is identified. The plan meets or exceeds all the time frames identified by the State in the RFP. In fact, we plan to be ahead of schedule due to the ability of Dominion to deliver products monthly beginning in August.

Being ahead of schedule allows us to focus on training and support services required during the roll out and preparation for the PPP election in March 2020.

Dominion anticipates over 300 subcontractors will be recruited, trained and deployed to perform strategic tasks as defined by our Project Management team over the course of the Implementation. Most subcontractors will be Georgia residents, and some will be retained as permanent employees of Dominion to provide local support for the GASOS and counties after the initial implementation.

Dominion's Security and Media/Outreach experts will be engaged day one of the contract period to provide the assistance we anticipate the GASOS will need to address media and other interested groups' coverage of the new system roll out. Dominion understands the scrutiny the new system and GASOS staff will face and commits to being by your side continually from the start of the project.

Form: Additional Products and Services

The schedule contains Dominion's list price for the items listed. Any pricing adjustments from list price would be determined at the time of purchase. Many of the cell calculations have changed since the original submission thus producing slightly different totals.

Section 1 – Background and Financial Capability

File 1-1 Org Structure

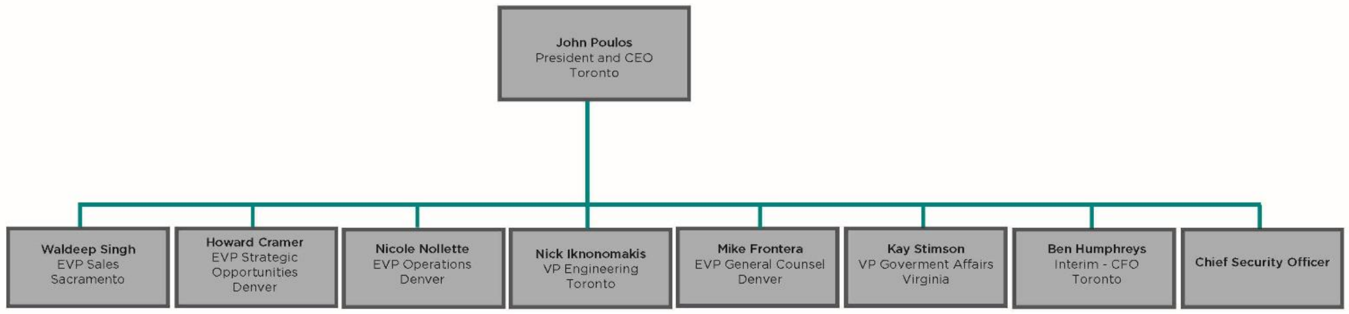
1.1 Describe the history of your business and organizational structure. Describe the organization and ownership structure to include parent companies, divisions, subsidiaries, headquarters, and regional offices. List key personnel including personnel that would supervise implementation of the proposed SVS and provide a CV or resume for each person uploaded as “Organizational Structure.”

Dominion Voting

Dominion is a company that has distinguished itself while pursuing excellence in customer service by implementing a technical culture focused on achieving the highest levels of accuracy, reliability and transparency. In 2010, Dominion deepened its roots as a leading company in the elections industry with the acquisition of assets from both Premier Voting Solutions and Sequoia Voting Systems. Today, Dominion’s human resource pool of more than 240 employees, consisting of seasoned election veterans and engineering experts has well over 2,000 years of combined elections experience conducting accurate and successful elections with our customers.

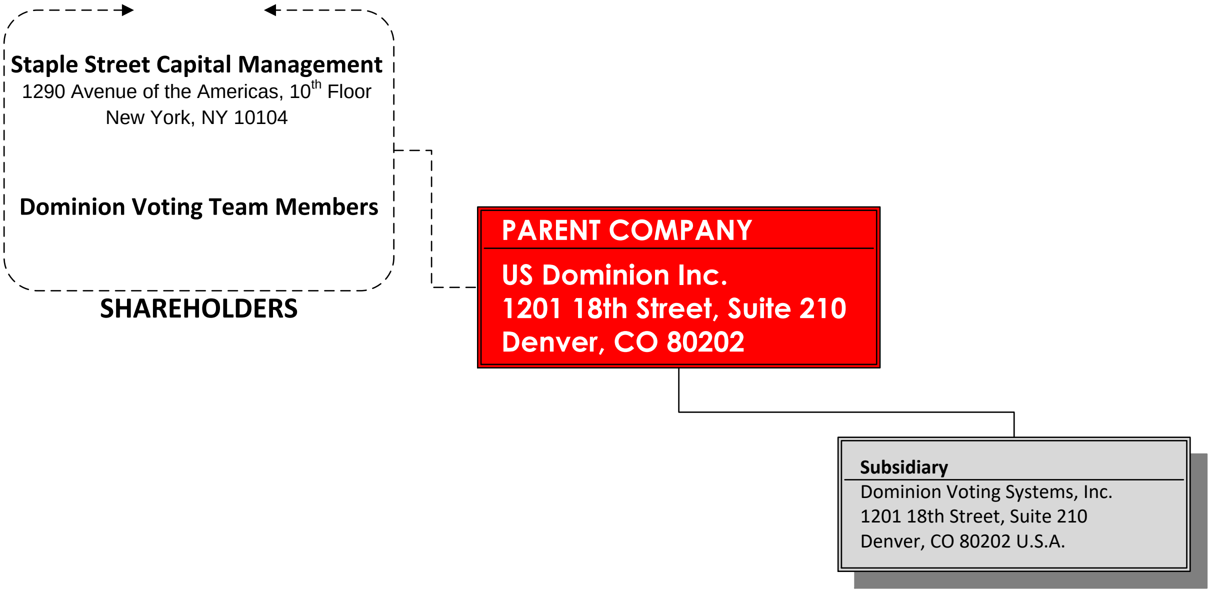
Dominion is headquartered in Denver, CO, with office locations in Toronto, ON, Jamestown and Endicott, NY, McKinney, TX, and San Leandro, CA. Dominion is strategically positioned in all 4 U.S. continental time zones to support its customer base of over 3,000 jurisdictions. Dominion is one of the largest and most trusted providers of elections technology solutions in the United States and the world. As an example, during the U.S. Presidential Elections in November 2016, roughly 35% of registered American voters cast their ballots using our equipment.

Below we provide the Executive-level organizational chart for Dominion:



Dominion Voting Systems, Inc. is a corporation and is wholly owned subsidiary of US Dominion, Inc., which is incorporated under the laws of the State of Delaware, USA. Dominion Voting System, Inc. does not have any subsidiaries.

On July 13, 2018 Dominion Voting was acquired by US Dominion, Inc. US Dominion, Inc.'s ownership is comprised of Staple Street Capital Management L.P. ("SSC"), which owns a controlling interest, as well as the Dominion Voting Systems, Inc. management team. SSC is a U.S.-based limited partnership organized under the laws of the State of Delaware. SSC's primary office location is 1290 Avenue of the Americas, 10th Floor, New York, New York 10104.


Staple Street Capital Management
1290 Avenue of the Americas, 10th Floor
New York, NY 10104
Dominion Voting Team Members
SHAREHOLDERS
PARENT COMPANY
US Dominion Inc.
1201 18th Street, Suite 210
Denver, CO 80202
Subsidiary
Dominion Voting Systems, Inc.
1201 18th Street, Suite 210
Denver, CO 80202 U.S.A.

Key personnel that will provide high level implementation and ongoing support will include the following individuals.

Project Role	Dominion Resource	Project Responsibilities
Executive Sponsor/ Program Management	Nicole Nollette, Vice President of Operations	• Championing the project • Obtains needed budget approval • Accepting responsibility for problems escalated by project team and Project Manager • Serves as a strong advocate for the project throughout the organization • Manages day-to-day resources
Account Manager	Barry Herron, Regional Sales Manager/Georgia Account Manager	• Project Vision • Communications Liaison • Project Deliverables Oversight

Project Manager	Jason Frank, Implementation Manager	• Manages overall project • Escalates, when needed, risks or issues that could or do impact team performance, project time line, scope, quality, and/or budget. • Reports project status and progress. • Creates and maintains project task plan, manages scope and change control processes. • Coordinates tasks among all areas of the organization that are involved or impacted by the project.
Implementation Manager	Tim Baumbach, Senior Manager, Customer Relations Manager	• Manages Day to date implementation activities • Manages resource task assignments • Manages contract labor as applicable • Tracking and reporting of project plan activites
Operations Project Manager	Scott Tucker, Customer Relations Manager	• Escalates, when needed, risks or issues that could or do impact team performance, project time line, scope, quality, and/or budget. • Coordinates tasks among all areas of the organization that are involved or impacted by the project. • Long term customer support representative
Infrastructure Specialist	Darren Silverburg Infrastructure Specialist	• Document technical project requirements • Responsible for development / test environments, • Responsible for troubleshooting technical issues • Technical liaison between the customer and project team • Provide technical support to the project team
Training Specialists	Cathi Smothers, Director of Elections Operations Training Mitch Keddrell, Training Specialist	• Participation in customer round table events to assess training needs • Development and customization of training plan • Scheduling • Staffing • Training coordination with internal and external staff
Security Accountability	Matt Horace, Chief Security Officer	• Oversight of key security development and implementation

Legislative Accountability	Kay Stimson, Vice President of Government Affairs	• Oversight of legislative forecasting and impact management
Subject Matter Experts (SMEs)	TBD based on post-implementation needs	• Provide professional expertise related to their discipline including development, engineering, products, logistics. • Provide mentorship to end users (customer), Dominion and KNOWiNK • Participate in ongoing meetings • Support system upgrade and installation activity

KNOWiNK

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Clarification Question

Please describe the funding relationship with any subcontracted arrangement. Who is the prime and what Supplier will be held accountable for contractual responsibilities. What level of dependency does the solution have on a secondary supplier? How will the risk of dependency on other Suppliers, for key components of the proposed solution, be managed?

Dominion Voting will be the Prime Contractor for the Georgia Voting System contract award. In that light we are partnering with KNOWiNK to provide the industry leading ePoll Book system for the voting system installation.

In addition, Dominion is also subcontracting with Diversified Technologies and EasyVote to provide staffing for defined tasks assigned to each company during the Implementation Plan as outlined in the body of Dominion's Proposal. As Prime, Dominion is the responsible party for the performance of the contract terms and conditions.

Dominion will manage any risk involved in reliance on subcontractors to perform to the standards expected of us in accordance with the contract terms and conditions. It is quite common for subcontractors to be utilized in major implementations. Dominion has staff that is assigned the responsibility of recruiting, training and deploying subcontractors that have passed the criteria to perform the tasks defined. The funding is provided from the overall contract revenue.

Section 2 – Election Management System

File 2-2 EMS Validation

2.2 Describe any software/firmware validation tools built into the device for use in installation, pre-election, and post-election testing to verify that software/firmware has not been modified.

All digital records are encrypted and signed, so the signature is the hash checksum. This applies to any software on the machine, but also to all election data. Should anything be added, the cryptographic hash will immediately be incorrect, which the system will detect and respond appropriately.

Dominion prides itself on the quality and security of our proposed solution for Georgia. Our demonstrated ability to certify and implement successful end-to-end systems begins with ensuring data quality and security from the development to the production phase of our installations.

All products in the Democracy Suite platform follow best software and application development practices, including additional source code quality and security procedures. All software programs satisfy recommended coding standards, as well as code styling guidelines as required by EAC VVSG standards. Automated code review processes are in place, that verify compliance with industry accepted coding standards for programming languages. In addition, proper system and software hardening procedures are clearly defined and regularly tested. Testing is performed on the lower source code level using code analysis tools, and at the system level using Nessus vulnerability testing tool. Data integrity and confidentiality is implemented according to NIST defined and FIPS validate procedures and algorithms.

All the code is stored in a secure manner within our organization and regularly backed up. Dominion's IT personnel further improve overall security through the usage of firewalls, intrusion detection/prevention systems, comprehensive employee training, and company-wide security policies. Continuous integration is performed on a daily basis along with in-depth testing, which maintains constant code quality. Documentation covers recommended secure configuration scenarios from securing host operating systems (by using antivirus software, firewall configuration, hardening scripts, performing regular updates, and being in an isolated environment) through encryption of application communication mechanisms, hard disk encryption, and election file encryption. Voting locations are physically secured by trained professionals, machines (tabulators) are locked down from modification through the use of appropriate seals and are uniquely identifiable by having appropriate certificates stored for use in authentication.

Dominion uses multi-level assurance and quality control processes to ensure that all elements of our integrated voting system perform properly with every use. Internal acceptance testing is performed on each voting system on receipt from the manufacturer. By the time our products are purchased by the customer, they have gone through three full rounds of acceptance testing. Independent reviews of election databases are conducted to prior Logic and Accuracy testing. We recommend (and support our customers to conduct) precinct-level pre-election testing.

In addition to this rigorous testing and control program designed to catch errors, Dominion Voting regularly conducts process audits of our acceptance testing, and programming processes to ensure that errors never occur.

Clarification Question

With consideration of the State's requirement for "hand held" paper ballots, in a closed network environment, please clarify the following:

A. Does the capability exist to validate the EMS software/firm using hash validation?

B. If yes, what are the steps needed to obtain a HASH value in the following scenarios? Please specify:

- **Initial Acceptance Testing,**
- **County Warehouse Pre-Election,**
- **Polling Place Setup, and**
- **Post Election review (saved as archived documentation).**

Note: Dominion has elected to not feature this functionality in the requested clarification video due to the sensitive nature of the content, and the potential for it to be subject to an open records request. Dominion would be happy to provide an in-person demo of the Hash validation methodology, in a secure setting, at the GASOS's convenience.

Yes. The capability exists to validate the EMS software/firm using hash validation.

File signatures (hash values) for the installation files and installed files that comprise each of the products included in the Democracy Suite 5.5 product group are created by the Voting System Test Laboratory responsible for testing these products. The lists of hash values that are generated for these files are maintained by a U.S. Election Assistance Commission (EAC) designated authority such as the National Software Reference Library (NSRL).

Customers can verify the authenticity of their certified Democracy Suite software and firmware by using a third-party hash value generation tool to generate SHA-256 hash values for these files.

[redacted]

Steps Needed To Obtain Democracy Suite EMS Hash Values

The following process features the steps needed to obtain a HASH value in the following scenarios:

- Initial Acceptance Testing,
- County Warehouse Pre-Election,
- Polling Place Setup, and
- Post-Election review (saved as archived documentation).

Verifying Installed Software on the EMS Client

Perform the following steps on the EMS client to verify the hash values of the installed software:

[redacted]

[redacted]

[redacted]

Compare each hash value to those listed in the provided Dominion Hash Values documentation for Democracy Suite Installed Files. Alternatively, the generated hash values can be compared against those maintained by the EAC-designated authority. After each hash value has been calculated and verified, the installed software can be considered verified and secure.

Verifying Installed Software on the EMS Server

Perform the following steps on the EMS server to verify the hash values of the installed software:

[redacted]

[redacted]

Compare each hash value to those listed in Appendix C Hash Values for Democracy Suite Installed Filest. Alternatively, the generated hash values can be compared against those maintained by the EAC- designated authority.

After each hash value has been calculated and verified, the installed software can be considered verified and secure.

Section 2 – Election Management System

File 2-3 EMS Audit

2.3 Describe the proposed EMS' post-election auditing capabilities.

Dominion's Results Tally and Reporting module can assist election officials in performing election canvasses and risk-limiting audits. This tool is capable of sorting and filtering images of ballots by ballot style, precinct, polling location, contest and candidate, for the purposes of a recount or post-election audit. Officials can review all the digital ballot images in an election, or a subset of ballots based on the chosen filtering conditions.

This tool provides an efficient and user-friendly interface for reviewing ballot images and associated results, as well as providing a framework to support a variety of auditing methodologies.

Results Tally and Reporting allows multiple officials to access digital ballot images with their Digital Ballot AuditMark marks, digital Cast Vote Records, and related review notes. Filtering options enables the creation of ballot review subsets for specific audit reviews. This tool resides in a secure post-election environment that is separate from EMS.

Officials can create ballot review sets by filtering for any given audit scenario including specific requests from Election Committees and other internal and external parties. Users may make notes to individual ballots and ballot review sets to aid in follow-on reviews and audit discussions. Administrators may create and assign a ballot review set to a specific official. Upon reviewing each ballot, officials may add a note, mark it for additional review, or mark it as complete. Ballots within a ballot review set may be sorted against these attributes as desired.

Efficiency is realized through filtering and sorting capabilities. Officials may select specific filter criteria including District, Precinct, Precinct Split, Contest, Candidate, Tabulator, Out stack Conditions, Mark Fill Percentage, Adjudicated, Ballot Type, and or Ballot ID.

Flexibility is realized through user-friendly screen designs to aid in the rapid selection of filters and their choices in both large and small data set scenarios. Furthermore, the Administrator may choose to distribute a large ballot review set across multiple users to speed the process.

The Cast Vote Record, (CVR) export, in JSON format, includes the highest degree of granularity, detailing up to each mark read by the system.

Results Tally and Reporting allows for intricate filtering and searches on the universe of ballots, including loading sets of ballots, precincts, ballot styles, districts to be retrieved. The system will allow authorized users to read the output of any system that generates random sampling of ballots.

This process will generate ballot sets that can be reviewed by multiple parties. The ballot set will contain the ballot images with all the AuditMarks, and the cast vote record for each ballot.

The use of the audit features is included as part of the training curriculums. In addition, Dominion will work with County Technicians on-site to assist as necessary

Clarification Question

How does the EMS support post election audits of the physical ballots cast? What reports or data export capability is there that would allow for tabulation audit comparison of tabulated results and a physical review and count of the paper ballots at the: A. Precinct Level, B. Ballot Box Level, and C. Any other level smaller than a precinct.

Dominion has developed a Ballot Audit and Review Module to assist election officials in performing election canvasses including audits and risk-limiting audits. This tool allows multiple officials to access digital ballot images with their digital ballot AuditMark® records, digital Cast Vote Records, and related review notes. Filtering options enable the creation of ballot review subsets for specific audit reviews, including the ability to filter images of ballots by ballot style, precinct, polling location, contest, and candidate, for the purposes of a recount or post-election audit. This tool resides in a secure post-election environment that is separate from EMS.

Officials can create ballot review sets by filtering for any given audit scenario including specific requests from Election Committees and other internal and external parties. Users may make notes to individual ballots and ballot review sets to aid in follow-up reviews and audit discussions. Administrators may create and assign a ballot review set to a specific election official. Upon reviewing each ballot, officials may add a note, mark it for additional review, or mark it as complete. Ballots within a ballot review set may be sorted against these attributes as desired.

Efficiency is realized through filtering and sorting capabilities. Officials may select specific filter criteria including District, Precinct, Precinct Split, Contest, Candidate, Tabulator, Outstack Conditions, Mark Fill Percentage, Adjudicated, Ballot Type, and or Ballot ID.

Flexibility is realized through user-friendly screen designs to aid in the rapid selection of filters and their choices in both large and small data set scenarios. Furthermore, the Administrator may choose to distribute a large ballot review set across multiple users to speed the review process. This tool will provide efficient and user-friendly interface for reviewing ballot images and associated results, as well as providing a framework to support a variety of auditing methodologies.

For ballots scanned centrally on the ImageCast Central, the ballots are identified by the order in which they were scanned, and are also stored by tabulator, and by batch. Each image is labeled with the tabulator, batch, and sequence number within the batch, which corresponds to the physical ballot in the stack. The AuditMark is appended directly to the image showing how the vote was interpreted at scan time. This AuditMark will also include any adjudications applied to the ballot for voter intent. Even if ballots for a given batch are mixed after scanning, these multiple records provide a way of correlating the digital Cast Vote Record data to the image scanned and finally to the physical paper ballot. While the AuditMark allows ballot-level auditing, it is never tied to the voter.

All ballots scanned are stored and referenced according to the scanning sequence number. Ballot images are each identified by a distinct number. This number consists of the tabulator on which the ballot was scanned, the batch number, and the index of that ballot within the batch. As an example, for the second ballot scanned in batch 245 on Tabulator 4, the scanned image filename would be 0004 0245 0002.tif). If this ballot ever needs to be located in the storage racks, the official must find the transfer case for Tabulator 4, Batch 245, open the box, and locate the second ballot from the top in the box, which will be the desired ballot.

File 2-6 EMS Ease of Use

2.6 Ease of Use for GASOS and Local Election Officials: Provide and demonstrate customer experiences via referrals and specific case studies or white papers including access, special features, and any other customer feedback.

Dominion works with more than 3,000 entities across North America to provide elections services, software and hardware. We pride ourselves on the partnership that we strive to build with each customer.

In addition to the references we provide in response to 0-7 References, we would like to offer several letters of reference from larger entities that are currently utilizing Democracy Suite and a similar product array as we are proposing in Georgia. Letters from Sacramento County and Contra Costa County, California will provide a high-level overview of the success we have experienced through the implementation and use of our system.

As letters can only provide a snapshot of the user experience, we would also like to provide several links to several testimonial videos produced in conjunction with our customers in the City and County of Denver, and Clark County, Nevada. We feel these video testimonials provide a picture of the type of partnership we commit to developing.

City and County of Denver:

https://www.youtube.com/watch?v=Zyqg-LcAkC0

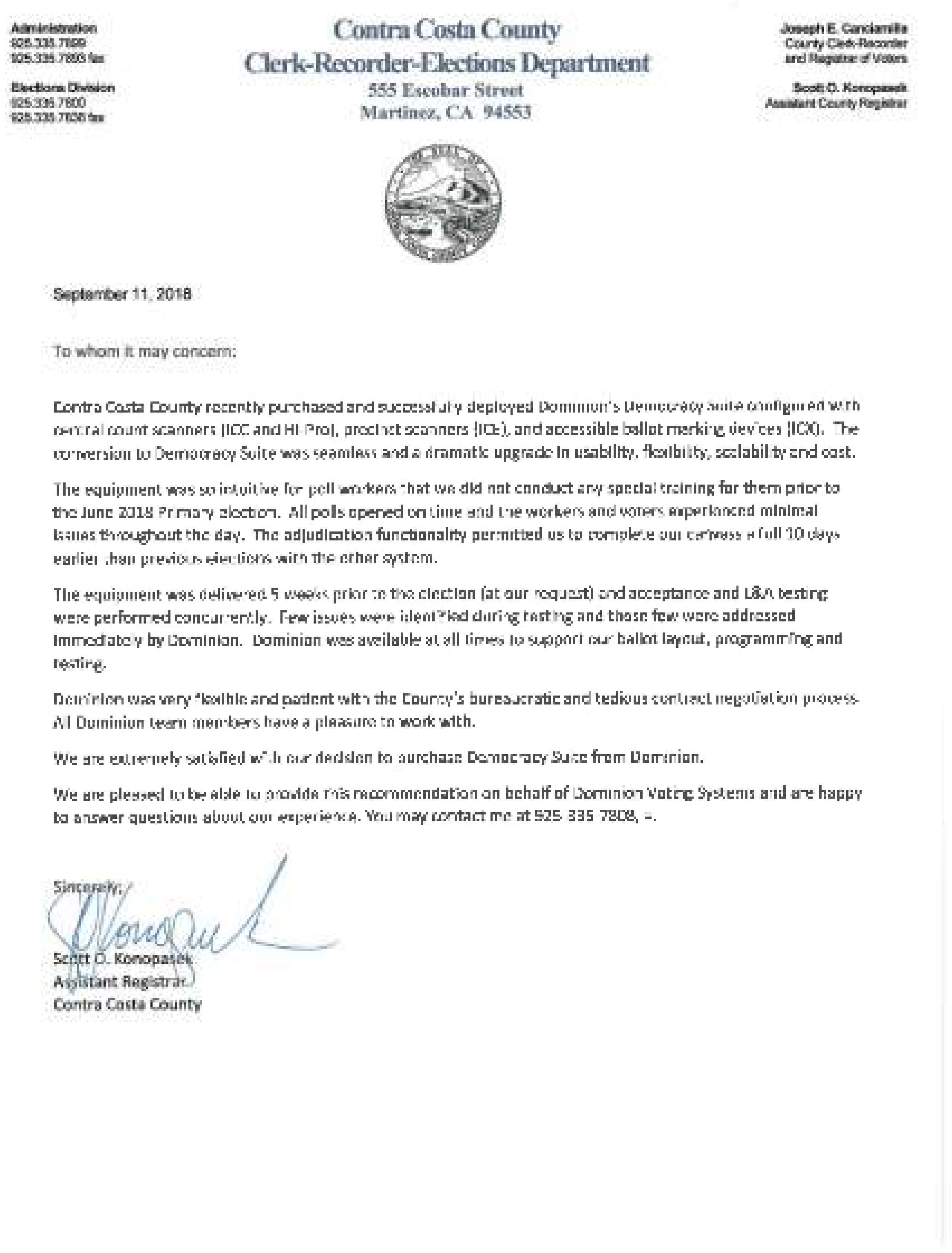
Clark County Video #1 -2018

https://www.youtube.com/watch?v=WejC40bgvic

Clark County Video #2 – 2017

https://youtu.be/j9TsDwsHVPA

Letters of reference provided on the following pages:



Administration
925.335.7899
925.335.7893 fax

Elections Division
925.335.7800
925.335.7836 fax

Contra Costa County
Clerk-Recorder-Elections Department
555 Escobar Street
Martinez, CA 94553

Joseph E. Canciamilla
County Clerk-Recorder
and Registrar of Voters

Scott O. Konopasek
Assistant County Registrar

September 11, 2018

To whom it may concern:

Contra Costa County recently purchased and successfully deployed Dominion's Democracy Suite configured with central count scanners (ICC and HI-Pro), precinct scanners (ICE), and accessible ballot marking devices (ICX). The conversion to Democracy Suite was seamless and a dramatic upgrade in usability, flexibility, scalability and cost.

The equipment was so intuitive for poll workers that we did not conduct any special training for them prior to the June 2018 Primary election. All polls opened on time and the workers and voters experienced minimal issues throughout the day. The adjudication functionality permitted us to complete our canvass a full 10 days earlier than previous elections with the other system.

The equipment was delivered 5 weeks prior to the election (at our request) and acceptance and L&A testing were performed concurrently. Few issues were identified during testing and those few were addressed immediately by Dominion. Dominion was available at all times to support our ballot layout, programming and testing.

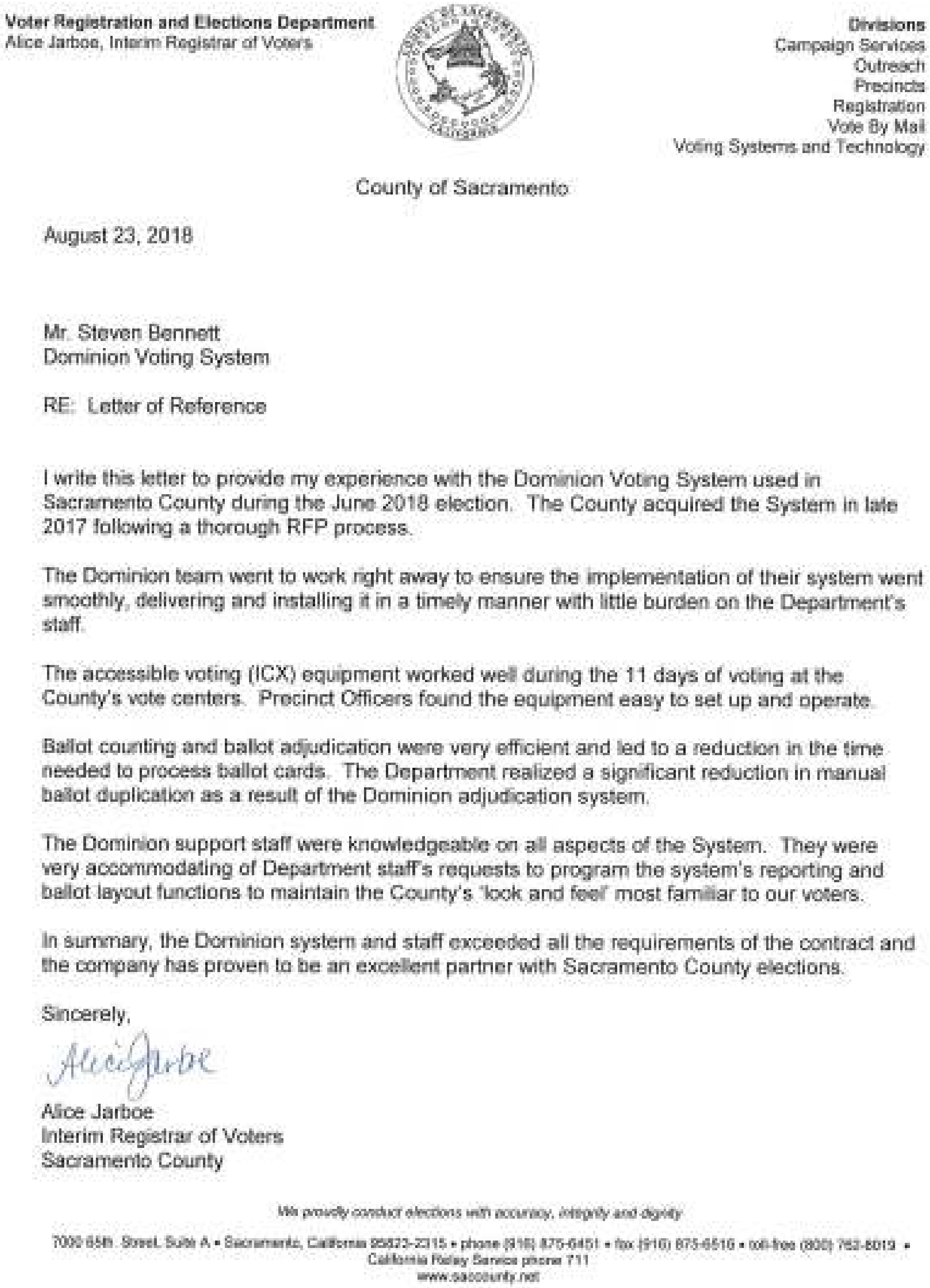
Dominion was very flexible and patient with the County's bureaucratic and tedious contract negotiation process. All Dominion team members have a pleasure to work with.

We are extremely satisfied with our decision to purchase Democracy Suite from Dominion.

We are pleased to be able to provide this recommendation on behalf of Dominion Voting Systems and are happy to answer questions about our experience. You may contact me at 925-335-7808, =.

Sincerely,

Scott O. Konopasek
Assistant Registrar
Contra Costa County



Voter Registration and Elections Department
Alice Jarboe, Interim Registrar of Voters

Divisions
Campaign Services
Outreach
Precincts
Registration
Vote By Mail
Voting Systems and Technology

County of Sacramento

August 23, 2018

Mr. Steven Bennett
Dominion Voting System

RE: Letter of Reference

I write this letter to provide my experience with the Dominion Voting System used in Sacramento County during the June 2018 election. The County acquired the System in late 2017 following a thorough RFP process.

The Dominion team went to work right away to ensure the implementation of their system went smoothly, delivering and installing it in a timely manner with little burden on the Department's staff.

The accessible voting (ICX) equipment worked well during the 11 days of voting at the County's vote centers. Precinct Officers found the equipment easy to set up and operate.

Ballot counting and ballot adjudication were very efficient and led to a reduction in the time needed to process ballot cards. The Department realized a significant reduction in manual ballot duplication as a result of the Dominion adjudication system.

The Dominion support staff were knowledgeable on all aspects of the System. They were very accommodating of Department staff's requests to program the system's reporting and ballot layout functions to maintain the County's 'look and feel' most familiar to our voters.

In summary, the Dominion system and staff exceeded all the requirements of the contract and the company has proven to be an excellent partner with Sacramento County elections.

Sincerely,

Alice Jarboe

Alice Jarboe
Interim Registrar of Voters
Sacramento County

We proudly conduct elections with accuracy, integrity and dignity

7000 65th Street, Suite A • Sacramento, California 95823-2315 • phone (916) 875-6451 • fax (916) 875-6516 • toll-free (800) 762-8019 •
California Relay Service phone 711
www.saccounty.net

Clarification Question

How will the proposed EMS assist GASOS in preparing 159 individual databases within 25 business days, where the county has a local race and a statewide race?

The proposed Dominion solution has the proven capability to meet the State’s requirement of preparing 159 individual databases for each of Georgia’s counties, within 25 business days. Dominion’s EMS, Democracy Suite, is currently being used in statewide production environments where a dedicated team of election programmers create the election projects used in multiple counties. In the EMS, template or master election projects will be built in the Election Event Designer (EED) module to streamline the process. These template projects are saved and then used from election to election eliminating the need to create projects from scratch for every county’s election event.

Statewide Ballot Development

Dominion has a dedicated programming team that produces election projects for the following states simultaneously:

- New Mexico – All 33 Counties
- Colorado – 59 of the 64 Counties
- Nevada – 15 of the 16 Counties

The average time frame for this single team to create all the election projects for these 107 counties in 3 different states is

Additional features of Democracy Suite that facilitate an election production environment include:

- EED’s built-in Cepstral voice synthesizer is leveraged to automatically generate all the audio needed for ADA-compliant audio ballots, which results in a significant reduction in production time. Human recorded audio can be imported if desired.
- All ballot types including paper absentee, audio, screen, and BMD are created and formatted in a single election project using the EED application.
- All tabulator types including, ImageCast Precinct, ImageCast X-Ballot Marking Device (BMD), and ImageCast Central are defined in and programmed from a single election project using the EED.

There are three primary methods for preparing election databases: Full Import, Partial Import, and No Import.

Methodology #1: Full Import

1. A template or master election project is created.
2. Copies of this election project are created; one for each county.
3. The State provides an import file for each county that contains all the data in all languages, including all associations, for example districts to precincts, links to existing ballot styling templates, and distribution of tabulators.
4. Election data is imported then ballots are laid out.
5. Minor modifications are made as needed and audio ballots are generated using the built-in Cepstral synthesizer.
6. Proofing packages are created and distributed to the counties.
7. Upon approval, ballot artwork is sent to the printers and finalized election projects are tested internally then distributed to the counties.

Finally, counties create the memory cards and USB's needed to load the election onto their voting devices.

Methodology #2: Partial Import

1. A template or master election project is created.
2. Copies of this election project are created, one for each county.
3. The State provides an import file for each county that contains some of the election data, such as associations, for example districts to precincts, needed to build the election.
4. Election data is imported then additional election data is added manually.
5. Ballots are laid out and minor modifications are made as needed.
6. Audio ballots are generated using the built-in Cepstral synthesizer.
7. Proofing packages are created and distributed to the counties.
8. Upon approval, ballot artwork is sent to the printers and finalized election projects are tested internally then distributed to the counties.

Finally, Counties create the memory cards and USB's needed to load the election onto their voting devices.

Methodology #3: No Import

1. A template or master election project is created for each county that contains all of the known static information for the county such as districts and precincts.
2. A copy of each county's template is made and used to build the election.
3. Election specific data is added manually.
4. Then ballots are laid out and minor modifications are made as needed.
5. Audio ballots are generated using the built-in Cepstral synthesizer.
6. Proofing packages are created and distributed to the counties.
7. Upon approval, ballot artwork is sent to the printers and finalized election projects are tested internally then distributed to the counties.

Finally, counties create the memory cards and USB's needed to load the election onto their voting devices.

Conclusion

Dominion will work closely with GASOS to develop a plan the will efficiently and effectively meet the needs of the State's 159 counties. The final plan may consist of any of the methodologies described above, or Dominion will collaboratively work with the State to define a new method.

Dominion is providing four (4) main redundant servers and 12 Client Workstations to the GASOS for the ballot building teams to utilize to the fullest. The amount of equipment provided to GASOS will ensure an efficient turnaround of election flies for distribution to the counties. Additionally, as stated above, Dominion will assist the State in customizing an environment to streamline the overall process including secure and efficient ways for the counties and State to share files.

The GASOS will have 45 BMD's, 18 PPS scanners, and 6 CSD central scanners to test databases prior to sending the data to counties for upload onto their voting devices. Having enough equipment from which to test, will enable the GASOS to build and test county ballots quickly and efficiently. Dominion can offer our Remote Ballot Printing module and ballot printer, so all ballots and test decks can be printed internally for testing by GASOS if necessary. The same module and printer can be offered to all counties, so they may print absentee ballots, test decks, and election day backup ballots internally.

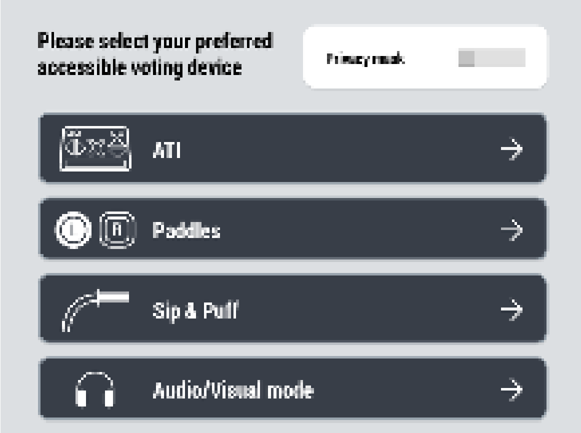
Section 2 – Election Management System

File 2-7 EMS ADA

2.7 Describe how the proposed EMS will support the building of ADA accessible ballots.

The proposed system outputs ballot content for accessible voting. The ballots created for UOCAVA and Interactive Online Sample Ballot users, as well as the ImageCast X BMD ballots, provide accessibility options such as font size (zoom), display options (contrast) audio options (volume/speed). Additionally, ballot navigation using the ImageCast X can be performed using an Audio Tactile Interface (ATI), which is a handheld device that is used by a voter during an Accessible Voting Session to navigate through and make selections to their ballot. The ATI:

- Has raised keys that are identifiable tactilely without activation (i.e. raised buttons of different shapes and colors, large or Braille numbers and letters)
- Can be operated with one hand
- Includes a 3.5 mm headphone jack
- Includes a T-Coil coupling
- Has a T4 rating for interference
- Uses light pressure switches
- Can be equipped with a pneumatic switch, also known as a sip and puff device, or a set of paddles.


Please select your preferred accessible voting device

The ImageCast X is compatible with a range of accessibility tools and can present the ballot in audio only, visual only or both audio/visual mode.

Democracy Suite 5.5A is compliant with VVSG 1.1 accessibility requirements. Additional information regarding the accessibility features of the ImageCast X Ballot Marking Device is included in response to 5-6 BMD ADA.

Audio Ballots

The ImageCast X supports the use of Audio ballots, which can be generated using any of three tools:

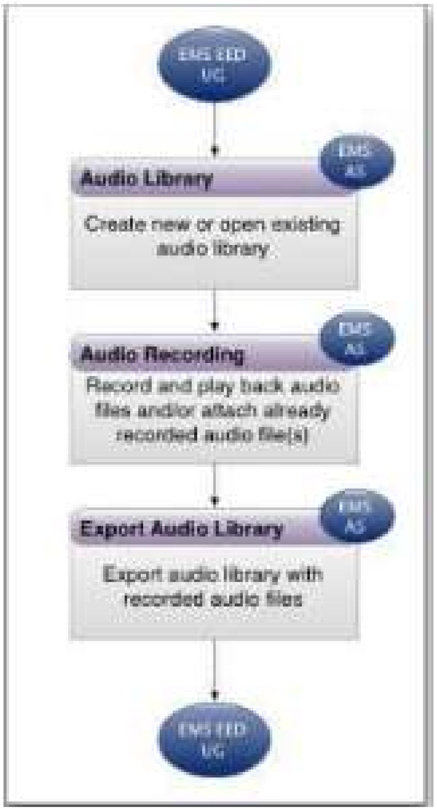
1. Using Cepstral, a third-party tool, as a component of EMS to synthesize audio.

Cepstral uses a text-to-audio synthesizer to automatically generate audio ballots for the ImageCast X. Users also have the option to import human-recorded audio, with or without the help of the EMS Audio Studio module, or fine tune pronunciation of the synthesized audio using Cepstral's Swifttalker application. The system outputs audio ballots (PNG images, SPX audio files and XML definition files), definition reports (XML, Excel, or HTML files), and election definition files required to program the ImageCast X, ImageCast Precinct and the ImageCast Central.

2. Using the EMS Audio Studio application to record and import audio files into an election project.

The Democracy Suite EMS Audio Studio application represents a pre-voting client application and as such, is used in combination with the EMS Election Event Designer (EMS EED) client application.

The functional flow of creating audio ballots using Audio Studio is detailed in the diagram below:

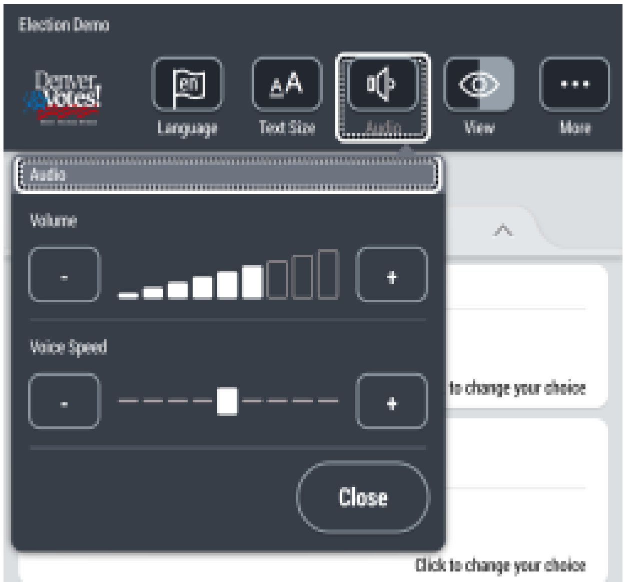

EMS EED UG
Audio Library
EMS AS
Create new or open existing audio library
Audio Recording
EMS AS
Record and play back audio files and/or attach already recorded audio file(s)
Export Audio Library
EMS AS
Export audio library with recorded audio files
EMS EED UG

3. Using an external application to produce audio files in the .wav (Wave) format. The audio files can be manually imported into Election Event Designer (EED) during the Ballots Generated project phase.

Audio files (in .wav format) that are produced by an external application may be manually imported and associated with the appropriate object.

The Audio Ballot creation process takes place during the ballot creation process, and is subject to the same approvals as paper or electronic ballots. During L&A, audio ballots are tested to ensure that all choices correspond to the readable format and audio ballot provides the same information as the readable ballot.

Following the creation of the Audio Ballots, voters benefit from an intuitive and customizable interface on the ImageCast X Prime, which presents the ballot in audio only, visual only, or both audio and visual modes, depending on personal preference. Voters can adjust the rate and volume of their audio ballot, as well as the text size and contrast of the display, or disable the display entirely for added privacy. Every voter configurable option is automatically reset to its default value with the initiation of each new voting session.



Voters can adjust the rate and volume of their audio ballot.

Voters are able to review, verify and correct their selections prior to printing their ballot, by audio and/or visual means. Voters are warned if they have missed, or undervoted a contest, and have the opportunity to go back and correct their selections. Once the ballot is printed, the voter scans their ballot on the ImageCast Precinct, the same as all other voters.

Deployed widely across California, Nevada, Colorado and Michigan, the ImageCast X has received the highest usability ranking by in-person voters with disabilities. The ImageCast X features the latest technological advances in accessible voting technology, providing more options for voters with accessibility needs to vote privately and independently.

At any time, the voter can select the Review button to view their selections on their ballot. The ballot review will show all of the contests on the ballot, and give warning messages if there are any issues with the ballot, such as an undervote or blank contest. If the voter wishes to modify a contest, they simply touch that contest from the review screen and they will be taken directly to that contest page so that they can update their selection(s).

Clarification Question

What specific functionality of the voting system shall "be accessible for individuals with disabilities, including nonvisual accessibility for the blind and visually impaired, in a manner that provides the same opportunity for access and participation (including privacy and independence) as for other voters consistent with federal laws and regulations.

The proposed voting system meets all standards for accessible voting as required by the established federal guidelines and regulations. Dominion's Democracy Suite software and hardware components were designed to meet all established requirements for Americans with Disabilities Act (ADA) features based on the requirements set forth in:

- Voluntary Voting System Guidelines (VVSG 1.1), Section 3.3 Accessibility Requirements
- Help America Vote Act (HAVA), Section 301. Voting Systems Standards

The proposed EMS, Democracy Suite 5.5A Election Management System (EMS), supports the design of accessible ballots, which in turn are uploaded to the ImageCast X Ballot Marking Device (BMD). The EMS-designed ballot, via the ImageCast X BMD, provides the ability for individuals with disabilities the same opportunity for access and participation (including privacy and independence) as for other voters consistent with the federal laws and regulations listed above.

Democracy Suite EMS Election Even Designer

The EMS' Election Event Designer (EED) module manages all of the information needed to define an election, including ballots to be used by individuals with disabilities, via the ImageCast X BMD. Definition of an election is a complex task, and the event definition module allows for the easy entry and tracking of districts, precincts, contests, candidate names, voting locations and ImageCast tabulators.

Election definition data may be entered manually, or imported using the Election Data Translator utility. The Election Data Translator utility allows the import of the election definition from State or County's election files further simplifying the election definition process for the County Administrator. Election definition data from may be exported or copied from prior election databases to speed up the process of coding subsequent elections. Election Event Designer uses the (County's, State's, jurisdiction's) geopolitical and election event data to automatically calculate the required ballot styles and generate accessible ballots.

The EMS system uses Cepstral, a third-party text-to-audio synthesizer, to automatically generate audio ballots for the ImageCast tabulators. Users also have the option to import human-recorded audio, with or without the help of the EMS Audio Studio module, or fine tune pronunciation of the synthesized audio using Cepstral's Swifttalker application. The system outputs audio ballots (PNG images, SPX audio files and XML definition files), definition reports (XML, Excel or HTML files), and election definition files required to program the ImageCast X BMD, and ImageCast Central.

Transferring Accessible Ballots from the EMS to the ImageCast X BMD

The ImageCast X BMD voting devices are defined and configured in the EMS' Election Project and these parameters are passed to the voting devices via the election files on the removable memory media. Election files include digitally signed and encrypted data about ballots, audio files, configuration files and other resources required for the operation of the ImageCast tabulators (ImageCast Precinct, ImageCast Central). Users can program memory packs (USB memory sticks for the ImageCast Central) one by one or using an Election Programming Station.

For the ImageCast Central scanners, the election definition is taken from Democracy Suite EMS, using the same database used to program the in-person voting devices for a given election. Multiple ImageCast Central scanners can be programmed for use in an election from this single database.

Additionally, Democracy Suite has a dedicated interface for programming the removable memory elements for the ImageCast X platform. In addition, the ImageCast Central tabulators can be configured either using removable memory elements identical to the ImageCast X tabulators, or through a secure local network connection with direct copy of the election files to each ImageCast Central system.

ImageCast X BMD Accessibility and Privacy

Once the accessible ballot has been designed in the EMS, and transferred to the BMD, ImageCast X BMD will enable individuals with disabilities to vote privately and independently. The ImageCast X BMD provides voters with disabilities the same opportunity for access and participation as for other voters. Designed as a voting solution for all, the ImageCast X offers the following user interfaces:

- **Visual Mode:** Voter navigates their ballot using one of the available accessibility tools and the visual display.
- **Audio Mode:** Visual display can be disabled and the voter uses headphones to navigate an audio ballot using one of the available accessibility tools.
- **Visual and Audio Mode:** Voter navigates their ballot using one of the available accessibility tools, the visual display, and the audio ballot.

The ImageCast X BMD allows for the addition of a “plug and play” Audio-Tactile Interface, to provide HAVA compliant accessibility to the unit. The ImageCast X has an intuitive touchscreen interface with various features for accessibility and connects to a printer that prints the voter’s ballot directly in the voting booth. Once the ballot is printed, it is placed in a secrecy folder, and the voter scans their ballot on the ImageCast Precinct, the same as all other voters.

The ImageCast X BMD Voting Booth provides any voter with privacy to access their ballot. The three-sided booth holds the ImageCast X BMD and its corresponding ballot printer. This ensures the voter has an appropriate environment to review the ballot, make selections, and print their marked ballot. The unit is designed so that any voter in a wheelchair can pull forward to the unit or by the side.

Additionally, as mentioned above, the ImageCast BMD offers an Audio Mode interface, which disables the touchscreen. This allows visually impaired voters to listen to the audio ballot via headphones, while making their selections with ATI, providing them complete privacy while voting.

For further information marking accessible ballots with ImageCast X BMD, please see Dominion’s response to MS-5.6.

Section 3 – Polling Place Scanners (PPS)

File 3-2 PPS Validation

3.2 Describe any software/firmware validation tools built into the device for use in installation, pre-election, and post-election testing to verify that software/firmware has not been modified.

Democracy Suite integrates a role-based access control system for all software and hardware components. Each user accessing the system is the member of one of the predefined or custom-made roles. Each role has its own set of permissions, or actions that users of that role are allowed to perform. This access control approach provides authentication and authorization services and can be granular according to the jurisdiction's needs and organization. Complete user and role membership management is integrated within the Democracy Suite EMS Election Event Designer client module.

Further, the ImageCast Precinct protects against unauthorized access or loading of malicious firmware by requiring two-factor authentication for all technician and pollworker menus. In order to gain access, a user must have a valid iButton and enter an authorized username and password.

As previously detailed, all products in the Democracy Suite platform follow best software and application development practices, including additional source code quality and security procedures. All software programs satisfy recommended coding standards, as well as code styling guidelines as required by EAC VVSG standards. Automated code review processes are in place, that verify compliance with industry accepted coding standards for programming languages. In addition, proper system and software hardening procedures are clearly defined and regularly tested. Testing is performed on the lower source code level using code analysis tools, and at the system level using Nessus vulnerability testing tool. Data integrity and confidentiality is implemented according to NIST defined and FIPS validate procedures and algorithms.

All the code is stored in a secure manner within our organization and regularly backed up. Dominion's IT personnel further improve overall security through the usage of firewalls, intrusion detection/prevention systems, comprehensive employee training, and company-wide security policies. Continuous integration is performed on a daily basis

along with in-depth testing, which maintains constant code quality. Documentation covers recommended secure configuration scenarios from securing host operating systems (by using antivirus software, firewall configuration, hardening scripts, performing regular updates, and being in an isolated environment) through encryption of application communication mechanisms, hard disk encryption, and election file encryption. Voting locations are physically secured by trained professionals, machines (tabulators) are locked down from modification through the use of appropriate seals and are uniquely identifiable by having appropriate certificates stored for use in authentication.

Dominion uses multi-level assurance and quality control processes to ensure that all elements of our integrated voting system perform properly with every use. Internal acceptance testing is performed on each voting system on receipt from the manufacturer. By the time our products are purchased by the customer, they have gone through three full rounds of acceptance testing. Independent reviews of election databases are conducted to prior Logic and Accuracy testing. We recommend (and support our customers to conduct) precinct-level pre-election testing.

In addition to this rigorous testing and control program designed to catch errors, Dominion Voting regularly conducts process audits of our acceptance testing, and programming processes to ensure that errors never occur.

Clarification Question

A. Does the capability exist to validate the software/firmware on the PPS using hash validation?

B. If yes, what are the steps needed to obtain a HASH value in the following scenarios? Please specify:

- **Initial Acceptance Testing,**
- **County Warehouse Pre-Election,**
- **Polling Place Setup, and**
- **Post Election review (saved as archived documentation).**

Note: Dominion has elected to not feature this functionality in the requested clarification video due to the sensitive nature of the content, and the potential for it to be subject to an open records request. Dominion would be happy to provide an in-person demo of the Hash validation methodology, in a secure setting, at the GASOS's convenience.

Yes. The capability exists to validate the PPS, ImageCast Precinct, software/firm using hash validation.

File signatures (hash values) for the installation files and installed files that comprise each of the products included in the Democracy Suite 5.5 product group are created by the Voting System Test Laboratory responsible for testing these products. The lists of hash values that are generated for these files are maintained by a U.S. Election Assistance Commission (EAC) designated authority such as the National Software Reference Library (NSRL).

Customers can verify the authenticity of their certified Democracy Suite software and firmware by using a third-party hash value generation tool to generate SHA-256 hash values for these files.

[redacted]

[redacted]

Steps Needed To Obtain ImageCast Precinct Hash Values

The following process features the steps needed to obtain a HASH value in the following scenarios:

- Initial Acceptance Testing,
- County Warehouse Pre-Election,
- Polling Place Setup, and
- Post-Election review (saved as archived documentation).

Verifying Hash Values for Installed Firmware

[redacted]

[redacted]

[redacted]

[redacted]

Compare each hash value to those listed in the provided Dominion Hash Values documentation for Democracy Suite Installed Files. Alternatively, the generated hash values can be compared against those maintained by the EAC-designated authority. After each hash value has been calculated and verified, the installed software can be considered verified and secure.

After each hash value has been calculated and verified, the installed software can be considered verified and secure.

Section 3 – Polling Place Scanners (PPS)

File 3-3 PPS Tabulation

3.3 Describe your PPS' tabulation process.

The ImageCast Precinct can be thought of as a sheet fed scanner. This means that as the paper is pulled through the machine, a complete image is taken of the top and bottom of the ballot. The scanner then passes this image to a software program which looks for markings (black squares which are often called `fiducials') around the ballot. If the correct number of fiducials is found, and the ballot bar code passes checksum logic tests, the software then knows that it is looking at a valid ballot.

Once a ballot is verified, the system begins to interrogate the ballot markings. To begin, the machine integrates every black pixel for each marking area corresponding to a position on the ballot. If the number of black pixels exceeds the threshold marking defined by the jurisdiction, the mark is considered a vote and a digital signal is created. If there is no mark present, an appropriate digital signal is created. For those cases where handwritten or write-in votes are present, the marks are detected and these ballots are placed in the secondary ballot compartment.

The machine is designed so that no ballot is allowed to pass the scanning stage unless:

- The scanner verifies that it is a valid ballot
- The scanner reads all the fiducials around the ballot image.

If, for whatever reason, the machine is unsure about the image, it will notify the operator with an appropriate error message (such as \Ballot Misread," \Please Insert Again," \Invalid ballot for this polling location," \DRO box not signed," etc).

In total, there are approximately 340 image checks that are performed on each image. If any check fails, the machine will report the ballot as misread and automatically reverse it. The system has been designed to have an error rate of less than 1 in 10,000,000 markings.

The imaging system is designed using a narrow paper path. This ensures that folds, creases, and crumpled ballots are imaged without any artifact appearing in the ballot image. If these artifacts appear and affect the image, an error message is given to the operator.

If proper marking devices are used, smudges do not occur. If a voter uses another type of pen, which does not dry before ballot insertion, the leading surfaces of the tabulation units contact the paper and prevent any wet ink or smudges from affecting the imaging of the initial or subsequent ballots.

The ImageCast Precinct allows ballots to be generated with marking positions for Write-Ins, if allowed under election laws, whereby a voter can write-in a candidate's name if that name does not appear on the ballot. When a ballot with Write-In markings is scanned, the ImageCast Precinct will record as many write-in votes as the number of candidates the voter is allowed to select, as per VVSG regulations.

The scanning process consists of real-time monitoring and interrogation of all ballot images before the batches are accepted. In essence, all ballots are scanned and then subjected to image processing, which determines if the ballot is valid and scanned correctly. If any scan fails this interrogation, the scanner ceases operation. It emits an audible and visual notification to the operator, and returns the ballot.

A high-level list of ImageCast Precinct features that support the scanning and tabulation function includes the following:

- Two (2) optical imaging scanners for creating a duplex scanned image of each side of the ballot. Ballots can be fed in all four (4) orientations.
- Linux Operating System.
- Two SD memory cards ports for storage capabilities. Two (2) 8GB SD memory cards will be provided and located behind two securable doors (Administrator Door and Pollworker Door).
- An interactive electronic display in the form of an ultra-high contrast graphical color 5.7" LCD screen, and a built-in touch screen for administration purposes.

- An internal 3” thermal printer and one (1) 3” paper roll for generating reports.
- One (1) administrative security key (iButton) used with an integrated receptacle (physically attached to the top of the unit and electrically connected to the motherboard) used for a variety of verification and security tasks such control, data confidentiality and integrity functions.
- A motorized paper feed mechanism for detecting and moving the ballot within the scanner. Ballots used with the ImageCast Precinct must be 8.5” wide by a variable length (11", 14", 17", 19” and 22"). The paper feed mechanism is physically capable of moving the ballot forward into the machine, across image sensors, enabling complete image capture of both sides of the ballot.
- Power supply module uses 120 Vac, 60 Hz, one phase power. It has a power consumption of 0.07 Amps at 120 Volts AC.
- An internal battery which is rated to provide six (2.5) hours of normal use in the absence of AC power. In addition to internal 2.5 hours battery an internal 6 hours battery option is also available. There is also a connection for an external 12VDC SLA battery.
- Patented functionality known as the AuditMark. For each ballot scanned and accepted into the unit, a corresponding ballot image is created and stored for audit purposes. The image consists of two parts described below:
    - The top portion of the image contains a scanned image of the ballot.
    - The bottom portion consists of a machine-generated text showing each mark that the unit interpreted for that particular ballot. This is referred to as the AuditMark.

Clarification Question

What is the model and size of the PPS proposed? Attach a picture.

The proposed Polling Place Scanner is the ImageCast Precinct as certified under Democracy Suite 5.5A.

ImageCast Precinct

Model number: PCOS-330A 16V AC

OS: Linux

Processor: NXP ARM Cortex-A9 Dual Core 1GHz

Memory: 2GB

Modem: External Multi-Tech HSPA USB Modem

Weight: 14 lbs.

Dimensions: 17” x 13” x 3.5”

ImageCast Precinct Ballot Box

The ImageCast Precinct includes a plastic ballot box to receive cast ballots directly from the ImageCast Precinct tabulator. The ballot box specs are:

Weight: 75 lbs.

Dimensions: 25” (W) x 37.5” (D) x 44” (H)

Section 3 – Polling Place Scanners (PPS)

File 3-4 PPS Audit

3.4 Describe what functions the PPS provides to assist with post-election audits.

Post election audits are performed in the Results Tally and Reporting module of Democracy Suite. The ImageCast Precinct assists with the overall function of a post-election audit by accurately scanning, imaging both sides of the ballot scanned and tallying all ballots fed through the unit during an election, adding the AuditMark detailing the system interpretation of the voter's intent, and running machine reports included applicable audit logs of all operations performed on the unit. Results are transferred from the ImageCast Precinct's removable flash memory devices to the central processing location for accumulation in the Results Tally and Reporting module.

All images saved with the attached AuditMark details are available for selection, review, edit or adjudication in the audit files selected by the county or state personnel.

Clarification Question

How does the PPS support post election audits of the physical ballots cast? What reports or data export capability is there that would allow for tabulation audit comparison of tabulated results and a physical review and count of the paper ballots at the: A. Precinct Level, B. Ballot Box Level, and C. Any other level smaller than a precinct.

As ballots are scanned using the ImageCast Precinct, a full image of all marks on both sides of the ballot are captured and the digital image is appended with our AuditMark detailing the system interpretation of the voter's intent. The physical paper ballot is deposited into the secure ballot box, and the results are stored on two compact flash memory cards - one is located in the Poll Worker slot (behind the Poll Worker Access Door) and the other in the Administrator compartment that is located behind the Administrator Access Door. Both memory card access doors should remain sealed for the entire election process, unless indicated otherwise by an election official.

The ImageCast Precinct also features a built-in thermal printer that prints various reports during the course of the election - zero reports, status reports and results reports.

One or more results tapes are printed directly by the internal thermal printer and the compact flash memory cards are removed to upload the results to a computer containing the Democracy Suite Results Tally and Reporting application.

Once the files are uploaded to the Results Tally and Reporting module of the Democracy Suite, users can produce fast, versatile and easy customizable reports from data available in the election project including reporting on a per tabulator basis as detailed below:

The Results Tally and Reporting module of the Democracy Suite EMS uses SQL Server Reporting Services to produce the following standard reports:

- Election Summary Report
- Statement of Votes Cast (precinct-level results)
- Cards Cast Report

All these reports can be exported to PDF, Microsoft Word, Microsoft Excel, and Microsoft PowerPoint.

These three reports allow filtering by Polling Location, Tabulator and Counting Group. Election Summary and SOVC reports can be customized to include a number of statistics including: Times Cast, Undervotes, Overvotes, Total Votes, Counting Group breakdown, Write-Ins, Percentage by ballots cast or by votes cast, sorting of candidates by global order or by votes received. Filters by contest, precincts, or districts can be applied. Report titles can be modified to indicate unofficial or canvass results. Report profiles can be saved, loaded and exported between election projects.

Additional reports include:

- Results per precinct (simplified precinct-level report)
- Contest overview data (simplified summary report)
- Located Scanned Ballots
- Results per Tabulator
- Canvass
- Write-Ins per Tabulator
- Registration and Turnout
- Contests on Margin
- Tabulator Status
- Ballots Cast per Ballot Style
- Ballots Cast per Tabulator

All these reports can be generated at the same time that scanning and adjudication is happening, without affecting performance or accuracy.

All reports can be customized. Headers can be customized to include “official” or “non-official” wording, or other desired wording.

Following an election project, ballots from the ImageCast Precinct are removed and stored based on jurisdictional procedures and requirements. Generally, this includes individual Counties providing appropriate storage containers for the ballots, which are sealed and properly labeled to identify the election and the specific ImageCast Precinct unit from which the ballots were cast. By labeling storage containers with the applicable ImageCast Precinct identification, physical ballots can be manually reviewed at a later date in the unlikely event the digital images will not provide the requisite information needed for a post-election audit.

Section 3 – Polling Place Scanners (PPS)

File 3-5 PPS Ease of Use

3.5 Ease of Use for Local Election Officials and Voters: Provide and demonstrate customer experiences via referrals and specific case studies or white papers including access, special features, and any other customer feedback.

Dominion works with more than 3,000 entities across North America to provide elections services, software and hardware. We pride ourselves on the partnership that we strive to build with each customer.

In addition to the references we provide in response to 0-7 References, we would like to offer several letters of reference from larger entities that are currently utilizing Democracy Suite and a similar product array as we are proposing in Georgia. Letters from Sacramento County and Contra Costa County, California will provide a high-level overview of the success we have experienced through the implementation and use of our system.

As letters can only provide a snapshot of the user experience, we would also like to provide several links to several testimonial videos produced in conjunction with our customers in the City and County of Denver, and Clark County, Nevada. We feel these video testimonials provide a picture of the type of partnership we commit to developing.

City and County of Denver:

https://www.youtube.com/watch?v=Zyqg-LcAkC0

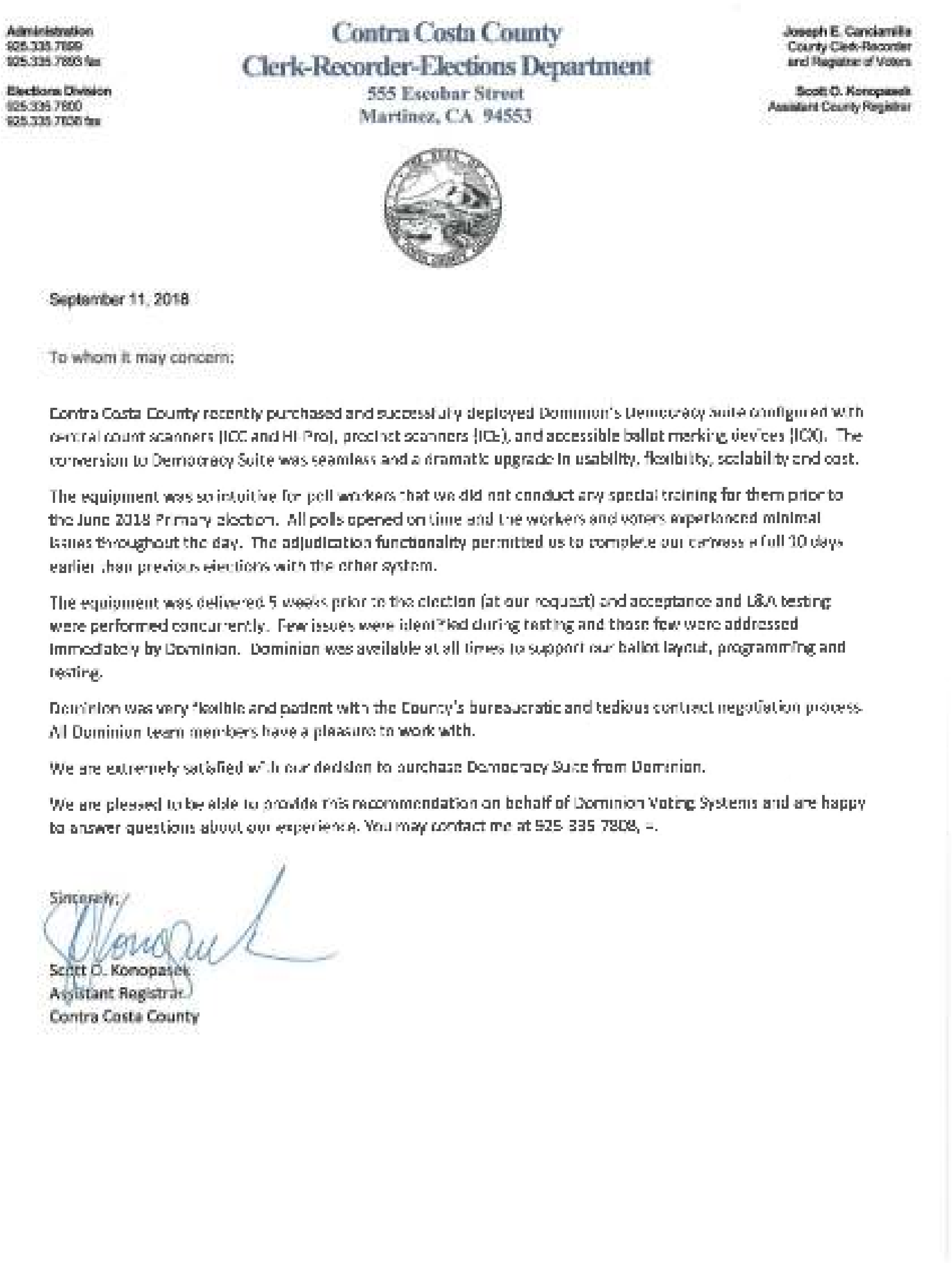
Clark County Video #1 -2018

https://www.youtube.com/watch?v=WejC40bgvic

Clark County Video #2 – 2017

https://youtu.be/j9TsDwsHVPA

Letters of reference provided on the following pages:



Administration
925.335.7899
925.335.7893 fax

Elections Division
925.335.7800
925.335.7836 fax

Contra Costa County
Clerk-Recorder-Elections Department
555 Escobar Street
Martinez, CA 94553

Joseph E. Canciamilla
County Clerk-Recorder
and Registrar of Voters

Scott O. Konopasek
Assistant County Registrar

September 11, 2018

To whom it may concern:

Contra Costa County recently purchased and successfully deployed Dominion's Democracy Suite configured with central count scanners (ICC and HI-Pro), precinct scanners (ICE), and accessible ballot marking devices (ICX). The conversion to Democracy Suite was seamless and a dramatic upgrade in usability, flexibility, scalability and cost.

The equipment was so intuitive for poll workers that we did not conduct any special training for them prior to the June 2018 Primary election. All polls opened on time and the workers and voters experienced minimal issues throughout the day. The adjudication functionality permitted us to complete our canvass a full 10 days earlier than previous elections with the other system.

The equipment was delivered 5 weeks prior to the election (at our request) and acceptance and L&A testing were performed concurrently. Few issues were identified during testing and those few were addressed immediately by Dominion. Dominion was available at all times to support our ballot layout, programming and testing.

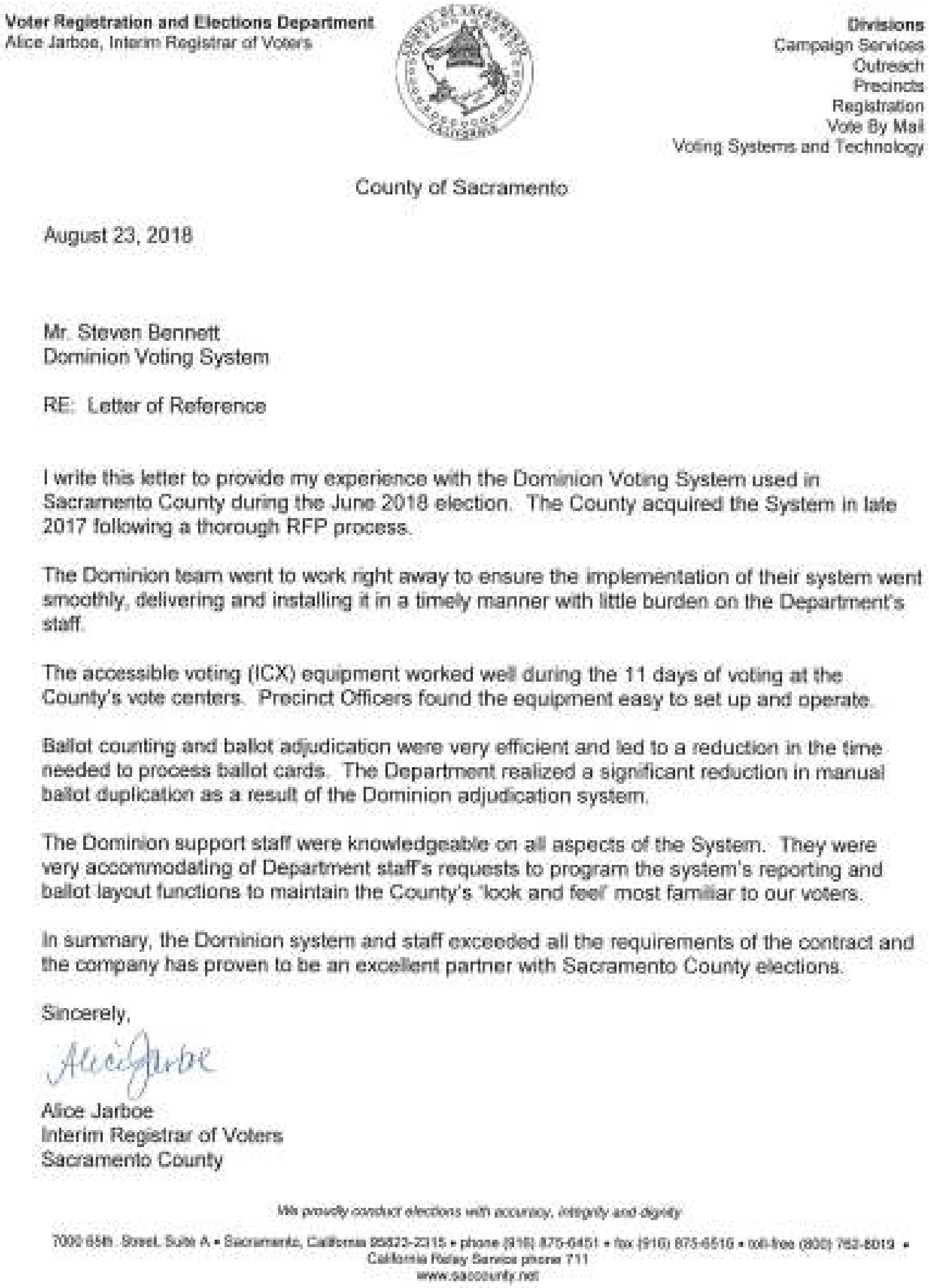
Dominion was very flexible and patient with the County's bureaucratic and tedious contract negotiation process. All Dominion team members have a pleasure to work with.

We are extremely satisfied with our decision to purchase Democracy Suite from Dominion.

We are pleased to be able to provide this recommendation on behalf of Dominion Voting Systems and are happy to answer questions about our experience. You may contact me at 925-335-7808, =.

Sincerely,

Scott O. Konopasek
Assistant Registrar
Contra Costa County



Voter Registration and Elections Department
Alice Jarboe, Interim Registrar of Voters

Divisions
Campaign Services
Outreach
Precincts
Registration
Vote By Mail
Voting Systems and Technology

County of Sacramento

August 23, 2018

Mr. Steven Bennett
Dominion Voting System

RE: Letter of Reference

I write this letter to provide my experience with the Dominion Voting System used in Sacramento County during the June 2018 election. The County acquired the System in late 2017 following a thorough RFP process.

The Dominion team went to work right away to ensure the implementation of their system went smoothly, delivering and installing it in a timely manner with little burden on the Department's staff.

The accessible voting (ICX) equipment worked well during the 11 days of voting at the County's vote centers. Precinct Officers found the equipment easy to set up and operate.

Ballot counting and ballot adjudication were very efficient and led to a reduction in the time needed to process ballot cards. The Department realized a significant reduction in manual ballot duplication as a result of the Dominion adjudication system.

The Dominion support staff were knowledgeable on all aspects of the System. They were very accommodating of Department staff's requests to program the system's reporting and ballot layout functions to maintain the County's 'look and feel' most familiar to our voters.

In summary, the Dominion system and staff exceeded all the requirements of the contract and the company has proven to be an excellent partner with Sacramento County elections.

Sincerely,

Alice Jarboe

Alice Jarboe
Interim Registrar of Voters
Sacramento County

We proudly conduct elections with accuracy, integrity and dignity

7000 65th Street, Suite A • Sacramento, California 95823-2315 • phone (916) 875-6451 • fax (916) 875-6516 • toll-free (800) 762-8019 •
California Relay Service phone 711
www.saccounty.net

Clarification Question

What is the size and total weight of the PPS when the scanner is connected and locked with the ballot receptacle? For the following ballot layouts, how many can the receptacle hold? 14" BMD/Mail Out ABS Ballot, 18" BMD/Mail Out ABS Ballot, or other sizes. What is the weight, when full? What can be expected in a power failure? Can ballots be stored and extracted for tabulation at a later time?

When the ImageCast Precinct is affixed to the standard rolling ballot box, the overall unit weight is approximately 90 pounds, and measures 41 inches high by 25 inches wide and 37 ½ inches deep. The ballot box has four wheels, making it easy for poll workers to move the unit as needed.

The ballot box features three separate bins.

- The primary bin collects all ballots that have been accepted and tabulated by the unit. The primary bin can hold up to 1,500 ballot cards.
- The secondary bin collects all ballots that were diverted for additional scrutiny and not tabulated. The secondary bin can hold up to 200 ballots.
- The auxiliary bin is utilized in the unlikely event the unit is temporarily inoperable. The auxiliary bin can hold up to 150 ballots. Ballots inserted into the auxiliary bin are stored and extracted for later tabulation.

At full capacity of 1,850 ballot cards, the unit will weigh approximately 140 pounds with 14 inch ballots using a 100 pound paper weight. However the ImageCast Precinct and ballot box are rarely moved when full, due to poll closing procedures such as removing ballots and memory cards for transport/delivery to election central.

In the event of a power failure, the ImageCast Precinct features an internal battery that will operate the unit for a minimum of two (2) hours.

When the ImageCast Precinct is operating on battery life alone, an amber LED light on the front of the unit will light up and an onscreen battery life indicator will appear in the corner of the display with the percentage of remaining battery capacity.

An optional external battery pack can be utilized at the polling place to extend unit operations beyond the internal battery capacity.

Section 3 – Polling Place Scanners (PPS)

File 3-8 PPS ADA

3.8 Describe how the proposed PPS will support ADA accessibility for scanning ballots.

The ImageCast Precinct is not being proposed as an accessible voting device. Dominion's proposed solution for accessible voting is the ImageCast X voting unit. Please refer to the sections detailing the ImageCast X BMD Accessibility features.

Clarification Question

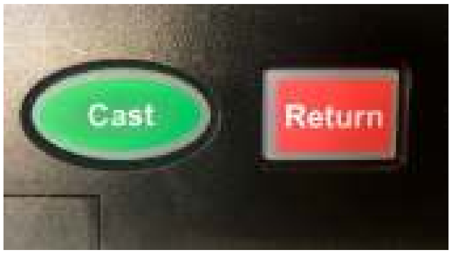
What specific functionality of the voting system shall "be accessible for individuals with disabilities, including nonvisual accessibility for the blind and visually impaired, in a manner that provides the same opportunity for access and participation (including privacy and independence) as for other voters consistent with federal laws and regulations.

The proposed voting system meets all standards for accessible voting as required by the established federal guidelines and regulations. Dominion's Democracy Suite software and hardware components were designed to meet all established requirements for Americans with Disabilities Act (ADA) features based on the requirements set forth in:

- Voluntary Voting System Guidelines (VVSG 1.1), Section 3.3 Accessibility Requirements
- Help America Vote Act (HAVA), Section 301. Voting Systems Standards

The proposed PPS, ImageCast Precinct, will be used only as a ballot scanning device within the Democracy Suite voting system solution. As such, it is designed to scan and cast ballots produced by the ADA-compliant ImageCast X Ballot Marking Device (BMD).

Casting a ballot with the ImageCast Precinct requires minimal dexterity and/or tactile force. The proposed PPS sits at counter height, has a feeder that mechanical accepts the ballot, and features two large buttons that enable the voter to Cast or Return their ballot. Once a ballot is cast, the ImageCast Precinct screen shows "Ballot Successfully Cast" and the unit makes an audible double beep, indicating the process is complete.



Additionally, the ImageCast Precinct is mounted on top of a ballot box, putting the ballot feeder at a height of approximately 40 inches, allowing the typical adult voter in a wheelchair to easily and comfortably cast their ImageCast BMD produced ballot.

For further information on designing and marking accessible ballots, please see the Dominion responses to MS-2.7 and MS-5.6, respectively.

Section 4 – Central Scanning Device

File 4-2 CSD Tabulation

4.2 Describe your CSD's tabulation process.

Paper Feed Mechanism

The ballot feed mechanism on the Canon DR-G1130 is intended to handle ballot sizes of 8.5” to 22”. The ballot feed mechanism on the Canon DR-M160II can also handle ballot sizes of 8.5” to 22”. The paper feed mechanism is physically capable of moving the ballot paper forward into the machine and across two image sensors (one on top, one on the bottom). These sensors provide image captures of both sides of the ballot.

The basic design of the scanners consists of separate upper and lower imaging surfaces (known as upper and lower units). These surfaces open up for convenient cleaning, maintenance and freeing of ballot jams. Pickup and drive rollers are located on the upper surface, and retard rollers are located on the lower surface. The continuous movement of the upper and lower surfaces minimize the number of ballot jams. The stepper motor torque and the paper feed mechanism's forces of friction have been optimized so that over-torque (where the ballot can tear) or under-torque (where the ballot can become stuck in the machine) do not occur.

Ballot Insertion and Capacity

An automatic document feeder is used to insert ballots. The DR-G1130 has a feeder capacity of 500 sheets. The DR-M160II has a feeder capacity of 60 sheets. Each feeder can also be operated in manual mode where one sheet is fed at a time.

When the ballots to be scanned are placed on the hopper, a sensor will detect that there is paper ready to be scanned. The operator initiates the scan using the ICC application. The scanner will then begin processing ballots automatically.

If there are no defective ballots, scanned images of all the processed ballots will have passed the quality checks and are ready for tabulation.

Multiple Sheet Detector

The ultrasonic double-feed sheet detector of each unit monitors if more than one sheet of paper is in the transport at one time, and will prevent the unit from counting marking positions from two ballots at the same time. Detection is based on an ultrasonic probe that is immune to ink markings on the ballot, as well as the thickness of paper.

Diagnostic Tests

An automated test that performs a diagnostic check and formal report on the system, including:

- Detecting and reporting the system's status and degree of operability
- Confirmation that there are no hardware or software failures
- Identification of the software release
- Status of all data paths and memory locations to be used in vote recording to protect against contamination of voting data
- Other information needed to confirm the readiness of the equipment and to accommodate administrative reporting requirements
- Confirmation that the device is ready for the poll to be opened
- Upon conclusion of the tests, the software provides evidence in the audit record that the test data has been expunged.

The central scanning devices also perform a set of diagnostic tests after every power on/off cycle. Some of these tests require operator intervention and some are fully automated. At the end of the diagnostics process, the system generates a report with the system status information.

For network applications and user interfaces, Democracy Suite EMS Results Tally & Reporting has the ability to generate a zero-state report before the system is utilized. This report extracts all the relevant counters from the database which should be zero before the central scanning process is started. Electoral officers can use this report not only to check that all candidates have no votes, but also to check that the lists of elections and associated candidates are correct.

The EMS system also executes a security report which creates a list of all terminals, workstations, central scanning devices and all authenticated operators within the system.

"Election Run" Mode functionality

During scanning, all ballot batches are placed on the ballot entry tray. Upon initiating a scan, the tabulator pickup roller grabs one ballot at a time and moves the paper over both scanning read heads (thus acquiring a complete image of both sides of the ballot). The ballot is then analyzed and defined as one or more of the following:

- Fully and properly marked ballot
- Misread ballot or invalid ballot
- Blank ballot
- Overvoted ballot
- Undervoted ballot
- Write-in ballot
- Ambiguous voting mark
- Ballot not linked to the current poll ID
- Ballot to which the write-in precedence rule was applied
- Overvoted party preference
- Unvoted party preference
- Cross-voted ballot
- Major overvote
- Major undervote
- Major overvoted rank
- Major inconsistent rank

- Major duplicate candidate rank
- Major skipped rank
- Major unvoted ranked contest
- Major unused rank
- Overvoted rank
- Inconsistent rank
- Duplicate candidate rank
- Skipped rank
- Unvoted ranked contest
- Unused rank

Ballot Scanning Errors

The following will halt the scanning process.

- Misread or Invalid ballot: A ballot that cannot be processed by the tabulator for whatever reason. This includes legitimate ballots that have been mis-scanned, foreign pieces of paper, or blank pages.

- Multiple sheet warning: If more than one (overlapping) ballot is fed into the scanner at the same time.

When the offending ballot has been located in the ballot exit tray, it is removed for resolution. In addition, the scanners may be configured to halt on additional error conditions (i.e. overvotes, undervotes, blank ballots, etc.).

Scanning a Batch

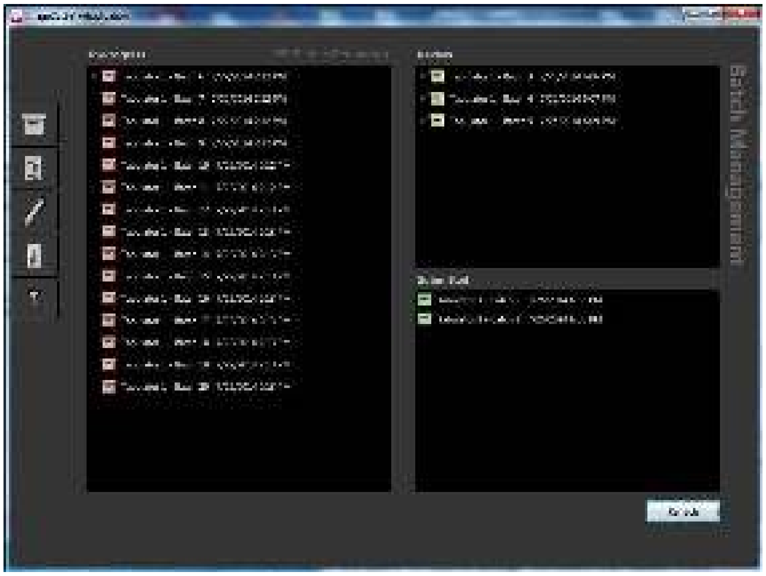
The ImageCast Central allows the user to easily scan and manage ballots. Below we provide details on the steps needed to scan a batch of ballots.

1. Load ballots on the scanner input tray
2. Click “Scan” on the workstation screen
3. Remove ballots form the output tray
4. Click “Accept Batch” on the workstation screen

Tracking and Managing Batches

Batches that do not have any outstack conditions are routed to the Results Tally and Reporting module for tabulation. Batched containing ballots with outstack conditions are routed to the Adjudication stations for further scrutiny.

Adjudication Administrators have the ability to track and review what batches are in adjudication (In Progress pane), which batches are ready for review (review pane) and which batches have been submitted to tally (Submitted pane), as seen in the screenshot below. The Adjudication Administrator can see at a glance how many ballots remain to be adjudicated.



Tabulating

Results Tally and Reporting (RTR) module allows for the upload of results files from in-person and central tabulation equipment. The consolidated results are verified, tabulated and published. RTR offers maximum flexibility to create predefined reports, in addition to a variety of standard Election Day reports including election summary, Statement of Votes Cast, Cards Cast and RCV round by round report. RTR also houses the algorithm for Ranked Choice Voting contests. Results files may be automatically uploaded to Results Tally and Reporting and consolidated results are available for verification prior to publishing.

An additional efficiency built into the Democracy Suite RTR module is that reports can be generated as ballot processing continues uninterrupted. Under legacy systems, pulling reports causes a disruption to ballot processing. This efficiency enables Counties to better respond to the community requests for real time election data; results are instantaneous.

- Once data is uploaded, the County will store all log files, data, and images.
- All data is reviewed, and published, then reported. These checks and balances occur prior to publication, thus reducing errors and increasing transparency.
- Reporting options are highly flexible. Counties can choose to complete a normal, standard based report, or on-the-fly election reports that are highly customizable, that

can meet any of the needs of the office and its constituents. Democracy Suite has the flexibility to output data in many common file formats such as excel, pdf, html, CSV and XML.

Clarification Question

What is the model and size of the CSD proposed? Attach a picture.

The proposed CSD, ImageCast Central, consists of the following components:

- Dell OptiPlex 7440 AIO
- Canon Model DR-G1130 scanner, or
- Canon Model DR-M160II scanner

Dell OptiPlex 7440 AIO Computer Specs

Processor: Intel® Core™ i3-6100 Processor (Dual Core, 3MB, 4T, 3.7GHz, 65W) ...

Operating System: (Dell recommends Windows 10 Pro.)

Monitor: 23.8" WLED Full-HD AIO Non-Touch Display.

Memory: 1 4GB2 DDR4 at 2133MHz. ...

Hard Drive: 2.5 inch 500GB 7200rpm Hard Disk Drive

Approximate weight: 15.9 lbs

Approximate Dimensions: 15.5”x22.6”x2.5”

<u>Canon Model DR-G1130 Specs</u>

Feeder Capacity: 48 mm stack or 500 sheets of 80 g/m² (20 lb bond)

Scanning Resolution: 150 x 150 dpi, 200 x 200 dpi, 240 x 240 dpi, 300 x 300 dpi, 400 x 400 dpi, 600 x 600 dpi

Scanning Speed: B&W 100 ppm Portrait/130 ppm Landscape

Power: AC 100V (50/60Hz), AC 120V (60Hz), AC220-240V (50/60Hz)

Approximate weight: 50.3 lbs

Approximate dimensions: 18.9”x21.1”x12.4”

<u>Canon Model DR-M160II Specs</u>

Feeder Capacity: 60 sheets 21 lbs. bond

Scanning Resolution: 150 x 150 dpi, 200 x 200 dpi, 240 x 240 dpi, 300 x 300 dpi, 400 x 400 dpi, 600 x 600 dpi

Scanning Speed: B&W 60 ppm

Power: DC24V 1.0A

Approximate weight: 7 lbs

Approximate dimensions: 11”x 10” x 9”

Section 4 – Central Scanning Device

File 4-2 CSD Validation

4.3 Describe your CSD's tabulation process.

Paper Feed Mechanism

The ballot feed mechanism on the Canon DR-G1130 is intended to handle ballot sizes of 8.5” to 22”. The ballot feed mechanism on the Canon DR-M160II can also handle ballot sizes of 8.5” to 22”. The paper feed mechanism is physically capable of moving the ballot paper forward into the machine and across two image sensors (one on top, one on the bottom). These sensors provide image captures of both sides of the ballot.

The basic design of the scanners consists of separate upper and lower imaging surfaces (known as upper and lower units). These surfaces open up for convenient cleaning, maintenance and freeing of ballot jams. Pickup and drive rollers are located on the upper surface, and retard rollers are located on the lower surface. The continuous movement of the upper and lower surfaces minimize the number of ballot jams. The stepper motor torque and the paper feed mechanism's forces of friction have been optimized so that over-torque (where the ballot can tear) or under-torque (where the ballot can become stuck in the machine) do not occur.

Ballot Insertion and Capacity

An automatic document feeder is used to insert ballots. The DR-G1130 has a feeder capacity of 500 sheets. The DR-M160II has a feeder capacity of 60 sheets. Each feeder can also be operated in manual mode where one sheet is fed at a time.

Customers may elect any quantity of batch size that makes the scanning process efficient for them. The county user may default to batch sizes of 150 ballots because that quantity makes the task of adjudicating ballots that have been flagged for review within a batch easier to manage. Batches maybe rerun without jeopardizing the other batches previously committed and ready for upload. In conclusion, we will work with each county to develop the processes and procedures regarding the central tabulation of ballots that works best for them.

When the ballots to be scanned are placed on the hopper, a sensor will detect that there is paper ready to be scanned. The operator initiates the scan using the ICC application. The scanner will then begin processing ballots automatically.

If there are no defective ballots, scanned images of all the processed ballots will have passed the quality checks and are ready for tabulation.

Multiple Sheet Detector

The ultrasonic double-feed sheet detector of each unit monitors if more than one sheet of paper is in the transport at one time, and will prevent the unit from counting marking positions from two ballots at the same time. Detection is based on an ultrasonic probe that is immune to ink markings on the ballot, as well as the thickness of paper.

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The central scanning devices also perform a set of diagnostic tests after every power on/off cycle. Some of these tests require operator intervention and some are fully automated. At the end of the diagnostics process, the system generates a report with the system status information.

For network applications and user interfaces, Democracy Suite EMS Results Tally & Reporting has the ability to generate a zero-state report before the system is utilized. This report extracts all the relevant counters from the database which should be zero before the central scanning process is started. Electoral officers can use this report not only to check that all candidates have no votes, but also to check that the lists of elections and associated candidates are correct.

The EMS system also executes a security report which creates a list of all terminals, workstations, central scanning devices and all authenticated operators within the system.

“Election Run” Mode functionality

During scanning, all ballot batches are placed on the ballot entry tray. Upon initiating a scan, the tabulator pickup roller grabs one ballot at a time and moves the paper over both scanning read heads (thus acquiring a complete image of both sides of the ballot). The ballot is then analyzed and defined as one or more of the following:

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- Misread ballot or invalid ballot
- Blank ballot
- Overvoted ballot
- Undervoted ballot
- Write-in ballot
- Ambiguous voting mark
- Ballot not linked to the current poll ID
- Ballot to which the write-in precedence rule was applied
- Overvoted party preference
- Unvoted party preference

- Cross-voted ballot
- Major overvote
- Major undervote
- Major overvoted rank
- Major inconsistent rank
- Major duplicate candidate rank
- Major skipped rank
- Major unvoted ranked contest
- Major unused rank
- Overvoted rank
- Inconsistent rank
- Duplicate candidate rank
- Skipped rank
- Unvoted ranked contest
- Unused rank

Ballot Scanning Errors

The following will halt the scanning process.

- Misread or Invalid ballot: A ballot that cannot be processed by the tabulator for whatever reason. This includes legitimate ballots that have been mis-scanned, foreign pieces of paper, or blank pages.

- Multiple sheet warning: If more than one (overlapping) ballot is fed into the scanner at the same time.

When the offending ballot has been located in the ballot exit tray, it is removed for resolution. In addition, the scanners may be configured to halt on additional error conditions (i.e. overvotes, undervotes, blank ballots, etc.). The central scanning process is user definable and customizable to meet their exact needs.

Results from the ImageCast Central

The ImageCast Central stores ballot images by scanned batches. The scanned ballot images are migrated to the Election Management System through computer networking or removable media. As with results data from any precinct scanners in use for an election, Results Tally and Reporting is the portion of EMS that processes the images to provide tabulation and operational reports to the jurisdiction.

Batches can be appended, deleted, and processed in a number of ways to suit typical election workflows, intake of ballots before, during, and after Election Day, jurisdictional requirements surrounding absentee ballot tabulation, and canvassing needs. The ImageCast Central also features all of the technological advances present in the precinct-level tabulators – the AuditMark and the Dual Threshold technology.

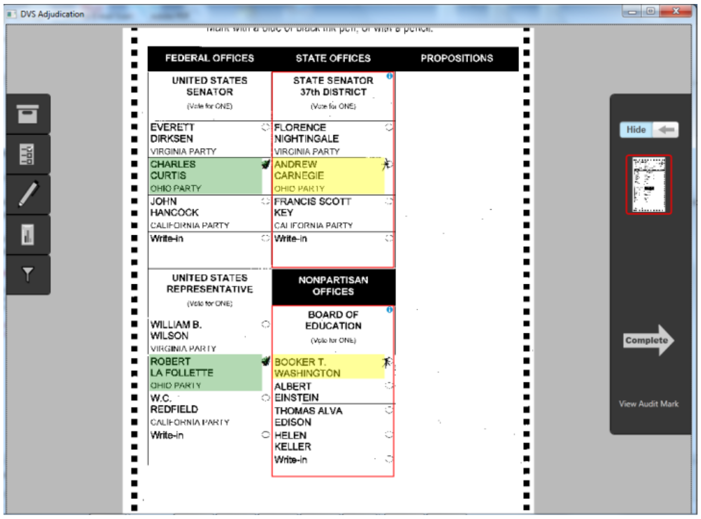
ImageCast Adjudication

The Adjudication Application is a stand-alone module that allows for the efficient processing of ballots that require resolution of voter intent on a ballot-by-ballot basis during the post-voting stage of an election. The Application has been developed to accept ballot files from ImageCast Central. After analysis and correction, the ballot files are sent to the EMS Results Tally & Reporting application for tally and reporting. The primary function of the Adjudication Application is to create an automated process that allows ballots with exceptions or "out-stack" conditions – such as overvotes, undervotes, blank ballots, marginal marks, major contests and certified write-ins – to be resolved on-screen and sent to tally. This eliminates the need for additional costs, time and resources spent on duplicating and re-scanning ballots.

Each County will be supplied with an Adjudication workstation to permit Adjudication of ballots with some anomalies to be performed simultaneously while the ballot scanning process is being conducted. This is an all new central scanning process that today's Dominion technology offers.

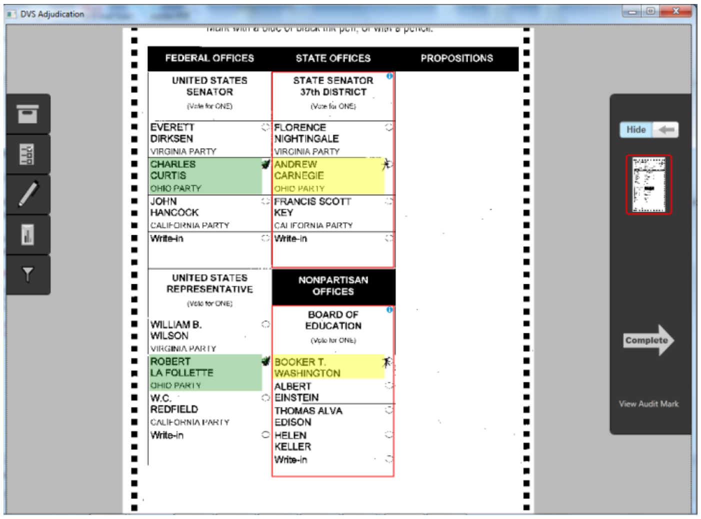
Streamlining Processing of Ballots with Conditions

The primary function of the Adjudication module is to create an automated process that allows ballots with exceptions or “out- stack” conditions to be resolved on-screen in real-time and sent to the results tally module. The customer defines which out-stack conditions should be reviewed in Adjudication, including blank ballots, overvotes, undervotes, marginal marks, and write-ins. Dominion’s digital adjudication tool allows for easy and efficient write- in resolution.



The Adjudication Application adds to the efficiency of Dominion’s ImageCast Central County system by making it scalable to as many reviewing teams as needed for the jurisdiction. The outstacked ballots will appear on the screen for the team to review as they come available. This created efficiencies that have never been seen in elections before.

In the examples shown to the right, the top picture shows the first adjudication screen with the contests that need review highlighted with a red box, and candidates with marginal marks highlighted in yellow. The second screen shows a vote being adjudicated for Andrew Carnegie.

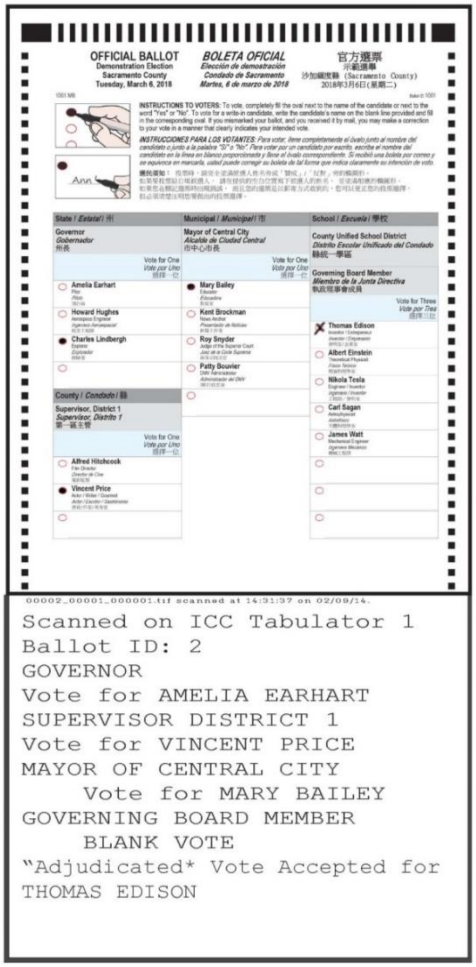


Adjudication also offers a robust, ballot-level audit trail. Each ballot scanned by the system is appended with an AuditMark. When a ballot is reviewed in the Adjudication module, and a user makes an adjudication decision, the ballot image is appended with a record of that decision: which user took what action at what time. This allows election officials to ensure that adjudication decisions made by authorized users can be further scrutinized and reviewed, and reversed if necessary, with a clear audit trail of which decisions were made concerning a particular ballot. When scanned centrally, the ballots are timestamped to further enhance the auditing capability of the system.

AuditMark

Enhancing Audit Capabilities and Transparency

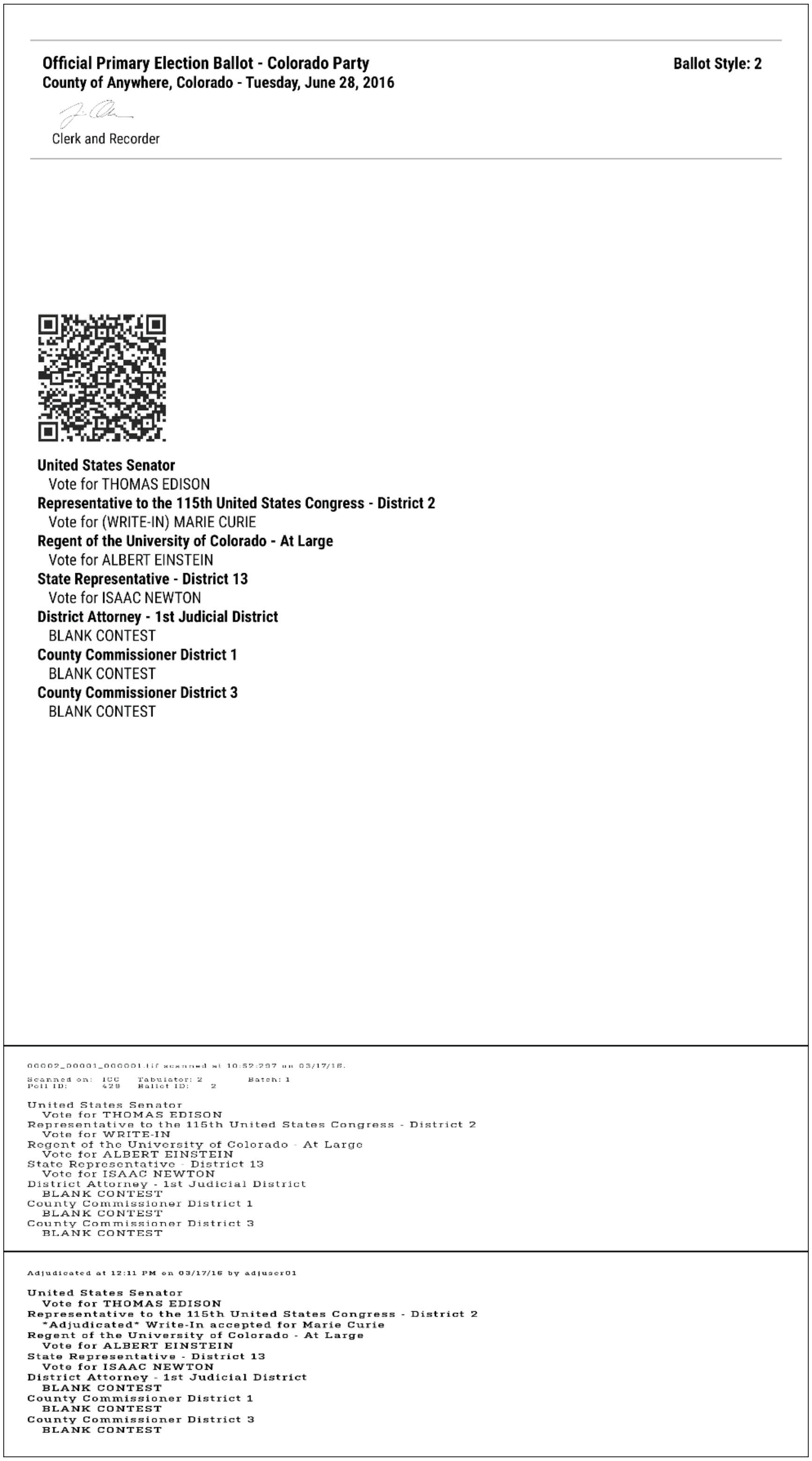
Dominion's AuditMark technology will allow the County to provide greater transparency in the electoral process. Every single ballot in the election is imaged and appended with Dominion's patented AuditMark, a record of how the system interpreted the voter's intent. The AuditMark is the only technology that provides a clear and fully auditable single vote cast record for every ballot cast. This ballot-level audit trail allows election officials and other stakeholders to review not only the ballot images, but also the tabulator's interpretation of each ballot.



```
00002_00001_000001.tif scanned at 14:31:37 on 02/09/14.
Scanned on ICC Tabulator 1
Ballot ID: 2
GOVERNOR
Vote for AMELIA EARHART
SUPERVISOR DISTRICT 1
Vote for VINCENT PRICE
MAYOR OF CENTRAL CITY
     Vote for MARY BAILEY
GOVERNING BOARD MEMBER
     BLANK VOTE
"Adjudicated* Vote Accepted for
THOMAS EDISON
```

Each image is labeled with the tabulator, batch, and sequence number within the batch, which corresponds to the physical ballot in the stack. The AuditMark is appended directly to the image showing how the vote was interpreted at scan time. This AuditMark will also include any adjudications applied to the ballot for voter intent. Even if ballots for a given batch are mixed after scanning, these multiple records provide a way of correlating the digital Cast Vote Record data to the image scanned and finally to the physical paper ballot. While the AuditMark allows ballot-level auditing, it is never tied to the voter.

ImageCast X ballot appended with Audit Mark and Adjudication



Official Primary Election Ballot - Colorado Party
County of Anywhere, Colorado - Tuesday, June 28, 2016

Ballot Style: 2

Clerk and Recorder

United States Senator
Vote for THOMAS EDISON
Representative to the 115th United States Congress - District 2
Vote for (WRITE-IN) MARIE CURIE
Regent of the University of Colorado - At Large
Vote for ALBERT EINSTEIN
State Representative - District 13
Vote for ISAAC NEWTON
District Attorney - 1st Judicial District
BLANK CONTEST
County Commissioner District 1
BLANK CONTEST
County Commissioner District 3
BLANK CONTEST

```
00002_00001_000001.tif scanned at 10:52:297 on 03/17/16.

Scanned on:  ICC    Tabulator: 2         Batch: 1
Poll ID:     429    Ballot ID:    2

United States Senator
   Vote for THOMAS EDISON
Representative to the 115th United States Congress - District 2
   Vote for WRITE-IN
Regent of the University of Colorado - At Large
   Vote for ALBERT EINSTEIN
State Representative - District 13
   Vote for ISAAC NEWTON
District Attorney - 1st Judicial District
   BLANK CONTEST
County Commissioner District 1
   BLANK CONTEST
County Commissioner District 3
   BLANK CONTEST
```

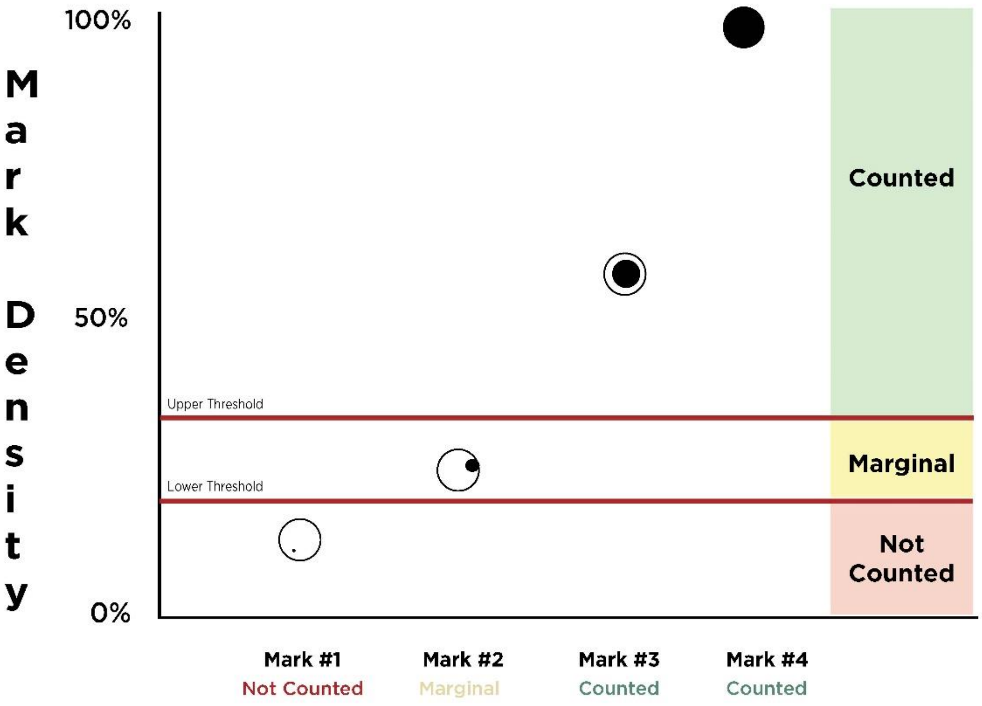
```
Adjudicated at 12:11 PM on 03/17/16 by adjuser01

United States Senator
   Vote for THOMAS EDISON
Representative to the 115th United States Congress - District 2
   *Adjudicated* Write-In accepted for Marie Curie
Regent of the University of Colorado - At Large
   Vote for ALBERT EINSTEIN
State Representative - District 13
   Vote for ISAAC NEWTON
District Attorney - 1st Judicial District
   BLANK CONTEST
County Commissioner District 1
   BLANK CONTEST
County Commissioner District 3
   BLANK CONTEST
```

Dual Threshold

When a hand-marked ballot is scanned by an ImageCast tabulator – at the precinct level or centrally – a complete duplex image is created and then analyzed for tabulation by evaluating the pixel count of a voter mark. The pixel count of each mark is compared with two thresholds (which are customer configurable, to determine what constitutes a vote).

If a mark falls above the upper threshold, it is determined to be a valid vote. If a mark falls below the lower threshold, it will not be counted as a vote. However, if a mark falls between the two thresholds (known as the "ambiguous zone"), it will be deemed as a marginal mark and the ballot will be flagged for adjudication where a team will review a voter's intent and the outcome noted in the system.



Dual Threshold Mark Detection - Marginal Marks

This is another advanced Dominion feature to aid the counties in increasing the accuracy of mark detection and auditability.

Clarification Question

A. Does the capability exist to validate the software/firmware on the CSD using hash validation?

B. If yes, what are the steps needed to obtain a HASH value in the following scenarios? Please specify:

- **Initial Acceptance Testing,**
- **County Warehouse Pre-Election,**
- **Polling Place Setup, and**
- **Post Election review (saved as archived documentation).**

Note: Dominion has elected to not feature this functionality in the requested clarification video due to the sensitive nature of the content, and the potential for it to be subject to an open records request. Dominion would be happy to provide an in-person demo of the Hash validation methodology, in a secure setting, at the GASOS's convenience.

Yes. The capability exists to validate the CSD, ImageCast Central, software/firm using hash validation.

File signatures (hash values) for the installation files and installed files that comprise each of the products included in the Democracy Suite 5.5 product group are created by the Voting System Test Laboratory responsible for testing these products. The lists of hash values that are generated for these files are maintained by a U.S. Election Assistance Commission (EAC) designated authority such as the National Software Reference Library (NSRL).

Customers can verify the authenticity of their certified Democracy Suite software and firmware by using a third-party hash value generation tool to generate SHA-256 hash values for these files.

[redacted]

Steps Needed To Obtain ImageCast Central Hash Values

The following process features the steps needed to obtain a HASH value in the following scenarios:

- Initial Acceptance Testing,
- County Warehouse Pre-Election,
- Polling Place Setup, and
- Post-Election review (saved as archived documentation).

Verifying Hash Values for Installed ImageCast Central Software

[redacted]

[redacted]

Compare each hash value to those listed in the provided Dominion Hash Values documentation for Democracy Suite Installed Files. Alternatively, the generated hash values can be compared against those maintained by the EAC-designated authority. After each hash value has been calculated and verified, the installed software can be considered verified and secure.

After each hash value has been calculated and verified, the installed software can be considered verified and secure.

Section 4 – Central Scanning Device

File 4-4 CSD Audit

4.4 Describe how the CSD assists with post-election audits.

Post-election audits can be done across 100% of the ballots cast in a given election because all ballots – hand marked Absentee ballots, provisional ballots, and BMD ballots will have been scanned and the total images stored. Each ballot scanned will include the AuditMark feature appended to each ballot image listing how each mark was interpreted by the scanning and tabulation process.

Further Dominion offers Risk Limiting Audit (RLA) functionality which is completely controlled and managed by the user. The parameters for selection of ballot populations to be audited range from a sampling of the precincts to 100% of the ballots cast is at your fingertips to validate the accuracy of the ballot casting processes.

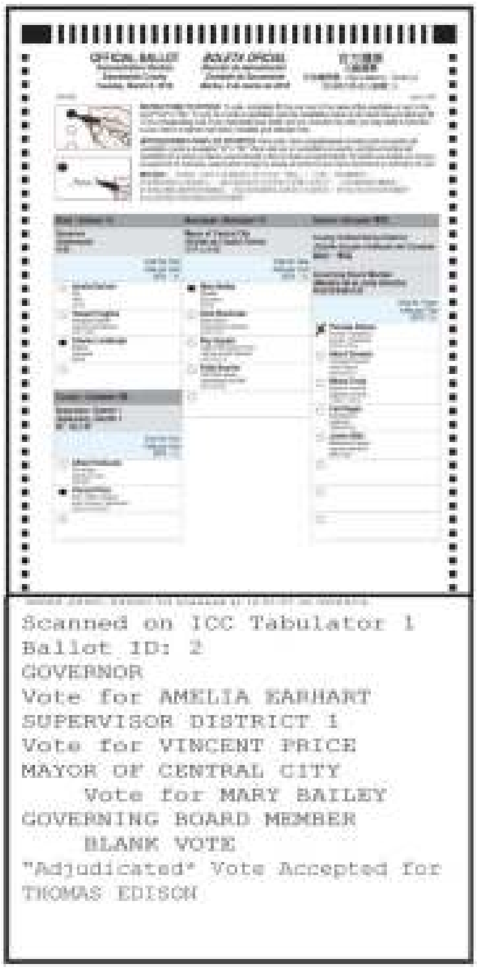
Post election audits are performed in the Results Tally and Reporting module of Democracy Suite. The ImageCast Central assists with the overall function of a post-election audit by accurately scanning, imaging both sides of the ballot scanned and tallying all ballots fed through the unit during an election. Below we describe the major functionalities that assist the overall accuracy for the scanning and tabulation process including the AuditMark and Dual Threshold technologies and the adjudication process:

AuditMark

Enhancing Audit Capabilities and Transparency

Dominion's AuditMark technology will allow the County to provide greater transparency in the electoral process. Every single ballot in the election is imaged and appended with Dominion's patented AuditMark, a record of how the system interpreted the voter's intent. The AuditMark is the only technology that provides a clear and fully auditable single vote cast record for every ballot cast. This ballot-level audit trail allows election officials and other stakeholders to review not only the ballot images, but also the tabulator's interpretation of each ballot.

Each image is labeled with the tabulator, batch, and sequence number within the batch, which corresponds to the physical ballot in the stack. The AuditMark is appended directly to the image showing how the vote was interpreted at scan time. This AuditMark will also include any adjudications applied to the ballot for voter intent. Even if ballots for a given batch are mixed after scanning, these multiple records provide a way of correlating the digital Cast Vote Record data to the image scanned and finally to the physical paper ballot. While the AuditMark allows ballot-level auditing, it is never tied to the voter.

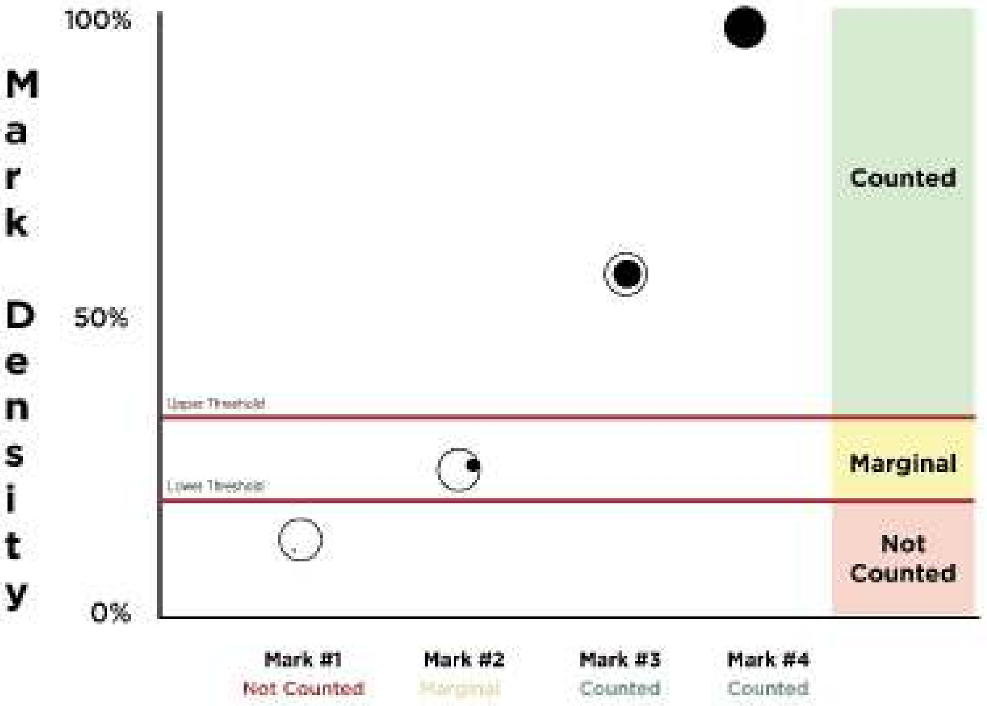


```
Scanned on ICC Tabulator 1
Ballot ID: 2
GOVERNOR
Vote for AMELIA EARHART
SUPERVISOR DISTRICT 1
Vote for VINCENT PRICE
MAYOR OF CENTRAL CITY
    Vote for MARY BAILEY
GOVERNING BOARD MEMBER
    BLANK VOTE
"Adjudicated" Vote Accepted for
THOMAS EDISON
```

Dual Threshold

When a hand-marked ballot is scanned by an ImageCast tabulator – at the precinct level or centrally – a complete duplex image is created and then analyzed for tabulation by evaluating the pixel count of a voter mark. The pixel count of each mark is compared with two thresholds (which are customer configurable, to determine what constitutes a vote).

If a mark falls above the upper threshold, it is determined to be a valid vote. If a mark falls below the lower threshold, it will not be counted as a vote. However, if a mark falls between the two thresholds (known as the “ambiguous zone”), it will be deemed as a marginal mark and the ballot will be flagged for adjudication where a team will review a voter’s intent and the outcome noted in the system.



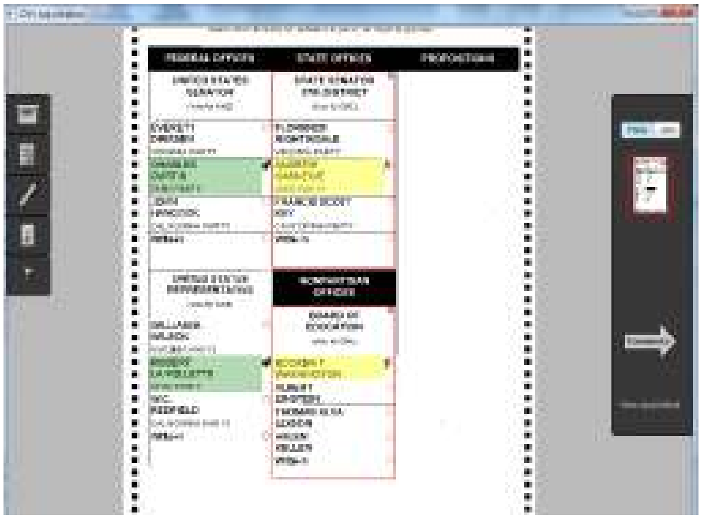
Dual Threshold Mark Detection - Marginal Marks

ImageCast Adjudication

The Adjudication Application is a stand-alone module that allows for the efficient processing of ballots that require resolution of voter intent on a ballot-by-ballot basis during the post-voting stage of an election. The Application has been developed to accept ballot files from ImageCast Central. After analysis and correction, the ballot files are sent to the EMS Results Tally & Reporting application for tally and reporting. The primary function of the Adjudication Application is to create an automated process that allows ballots with exceptions or "out-stack" conditions – such as overvotes, undervotes, blank ballots, marginal marks, major contests and certified write-ins – to be resolved on-screen and sent to tally. This eliminates the need for additional costs, time and resources spent on duplicating and re-scanning ballots.

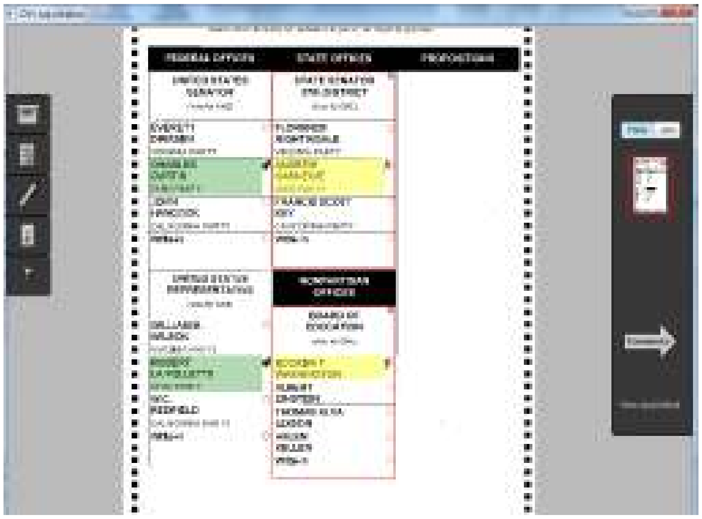
Streamlining Processing of Ballots with Conditions

The primary function of the Adjudication module is to create an automated process that allows ballots with exceptions or "out- stack" conditions to be resolved on-screen in real-time and sent to the results tally module. The customer defines which out-stack conditions should be reviewed in Adjudication, including blank ballots, overvotes, undervotes, marginal marks, and write-ins. Dominion's digital adjudication tool allows for easy and efficient write- in resolution.



The Adjudication Application adds to the efficiency of Dominion's ImageCast Central County system by making it scalable to as many reviewing teams as needed for the jurisdiction. The outstacked ballots will appear on the screen for the team to review as they come available. This created efficiencies that have never been seen in elections before.

In the examples shown to the right, the top picture shows the first adjudication screen with the contests that need review highlighted with a red box, and candidates with marginal marks highlighted in yellow. The second screen shows a vote being adjudicated for Andrew Carnegie.



Adjudication also offers a robust, ballot-level audit trail. Each ballot scanned by the system is appended with an AuditMark. When a ballot is reviewed in the Adjudication module, and a user makes an adjudication decision, the ballot image is appended with a record of that decision: which user took what action at what time. This allows election officials to ensure that adjudication decisions made by authorized users can be further scrutinized and reviewed, and reversed if necessary, with a clear audit trail of which decisions were made concerning a particular ballot. When scanned centrally, the ballots are timestamped to further enhance the auditing capability of the system.

Reporting

As ballots are scanned, batches are directed to the Adjudication module if outstack conditions are detected, or sent to the Results Tally and Reporting module for tabulation.

Once batches are sent into the Results Tally and Reporting module, extensive reporting capabilities are available that will assist in reporting and auditing functions. The Results Tally and Reporting module of the Democracy Suite EMS produces fast, versatile and easy customizable reports from data available in the election project. The Results Tally and Reporting module of the Democracy Suite EMS uses SQL Server Reporting Services to produce the following standard reports:

- Election Summary Report
- Statement of Votes Cast (precinct-level results)
- Cards Cast Report

All these reports can be exported to PDF, Microsoft Word, Microsoft Excel, and Microsoft PowerPoint.

These three reports allow filtering by Polling Location, Tabulator and Counting Group. Election Summary and SOVC reports can be customized to include a number of statistics including: Times Cast, Undervotes, Overvotes, Total Votes, Counting Group breakdown, Write-Ins, Percentage by ballots cast or by votes cast, sorting of candidates by global order or by votes received. Filters by contest, precincts, or districts can be applied. Report titles can be modified to indicate unofficial or canvass results. Report profiles can be saved, loaded and exported between election projects.

Additional reports include:

- Results per precinct (simplified precinct-level report)
- Contest overview data (simplified summary report)
- Located Scanned Ballots
- Results per Tabulator
- Canvass
- Write-Ins per Tabulator
- Registration and Turnout
- Contests on Margin
- Tabulator Status
- Ballots Cast per Ballot Style
- Ballots Cast per Tabulator

All these reports can be generated at the same time that scanning and adjudication is happening, without affecting performance or accuracy.

All reports can be customized. Headers can be customized to include “official” or “non-official” wording, or other desired wording.

Extensive filtering and sorting capabilities allow for detailed breakdowns to provide information for any level of any contest as detailed below in the Election Summary Report and the Statement of Votes Cast (SoVC) Report explanations below:

Election Summary Report

The Election Summary Report displays election results by race, and is summarized across the jurisdiction. The information on these reports include the number of ballots cast, and the number of undervotes, overvotes, blank votes, and double votes.

The user is able to select one or more of the following Contest Statistics for inclusion in the report:

- Times Cast
- Undervotes
- Overvotes
- Combine Overvotes and Undervotes as ”Blanks”
- Double votes
- Total votes
- Counting Group Totals Only
- Writein Overrides
- Vote For
- X of Y

Candidate Statistics can include:

- Party affiliation
- If candidates are cross-endorsed, the user can break down results per party affiliation by leaving the item unchecked.
- Highlight Winners

- The user can show remaining Unresolved Write-in row or to hide that row
- The user can choose to count unresolved write-ins as undervotes
- The user can choose how percentages are calculated:
    - No percentages
    - Divided by Votes Cast
    - Divided by Ballots Cast
- – The user can choose how Write-Ins are represented:
    - No Write-ins
    - Combine - show single Write-In
    - Split - show individual Write-In positions in the contest

Additional Sorting/Splits

- – The user can indicate if the results should be broken down or not. Results can be broken
- down by:
    - Tabulator - Results are grouped per tabulator
    - Batch - Results are grouped per batch
- The user can choose how to sort candidates by the following criteria:
    - Global Order
    - Number Votes in descending order

The Filters for Report

- Filter for Contests - The user can choose to display all contests, or, by clicking the filter radio

  button, the user can select one or more contests to be displayed in the report, from the list provided on the form.
- Filter for Districts or Precincts - The user can select to display the results by districts or by precincts. For either selection, the user can display all districts/precincts, or, by

clicking the filter radio button, the user can display one or more districts/precincts in the report, from the list provided on the form.

- Filter for Polling Location - From the combo box on the form, the user can filter the report results by polling location.
- Filter for Tabulator - The user can choose to include results for all tabulators, or, by clicking the" filter" radio button, the user can select one or more tabulators to be included in the report, from the list provided on the form.
- Filter for Counting Group - From the combo box on the form, the user can filter report results by counting groups.

Statement of Votes Cast

The Statement of Votes Cast report provides election officials with the detailed results of an election. The report is divided into two sections: the first section is an overview of the cards cast and eligible voters broken down per precinct, district, and district type. The second section shows the election results on a contest-by-contest basis and includes the number of ballots cast, the vote totals for each candidate, and the number of write-ins, undervotes, and overvotes.

The user can customize the report title and allows for extensive filtering and customizations including:

Contest Statistics:

- Times Cast
- Undervotes
- Overvotes
- Double votes
- Total votes
- Counting Group Totals Only
- Write-in Overrides
- Vote For

Candidate Statistics:

- The user can break down results per party affiliation in the case that candidates are cross-endorsed by leaving the item unchecked
- The user can display remaining Unresolved Write-in column or to hide that column
- The user can choose to count unresolved write-ins as undervotes.
- The user can select how percentages are calculated:
    - No percentages
    - Divided by Votes Cast
    - Divided by Ballots Cast

- The user can select how Write-Ins are represented:
    - No Write-ins
    - Combine - show single Write-In
    - Split - show individual Write-In positions in the contest

- The user can choose how to split the data:
    - By Precinct
    - By District Detailed information
    - Precinct Portion
    - By Ballot Type

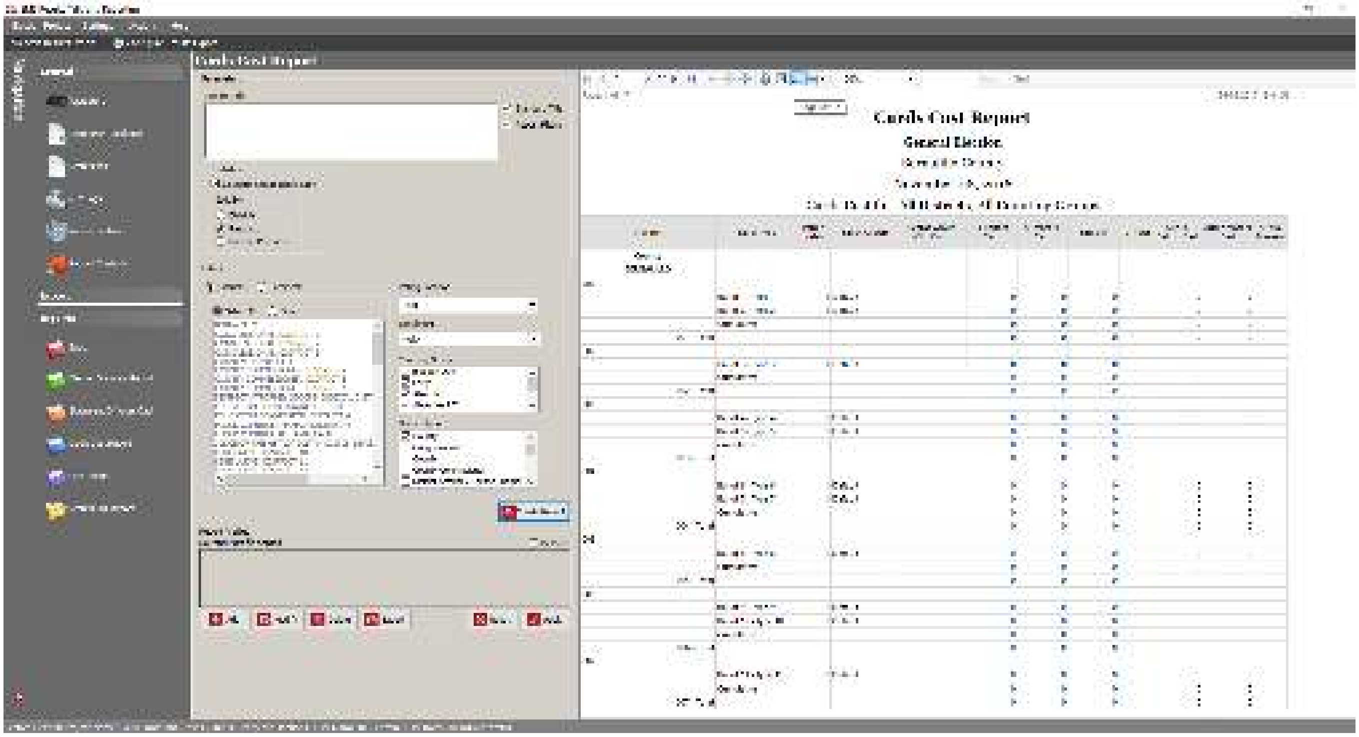
- **The Filters for Report**
    - Filter for Contests - The user can choose to display all contests, or, by clicking the filter radio button, the user can select one or more contests to be displayed in the report from the list provided on the form. Note: This filter does not affect the first report section, if the user wishes to narrow the first section of the report the Filter for Districts or Precincts must be used.
    - Filter for Districts or Precincts - The user can select if they wish to display the results by districts or by precincts. For either selection, the user can display all

districts/precincts, or, by clicking the Filter radio button, the user can display one or more districts/precincts in the report from the list provided on the form.

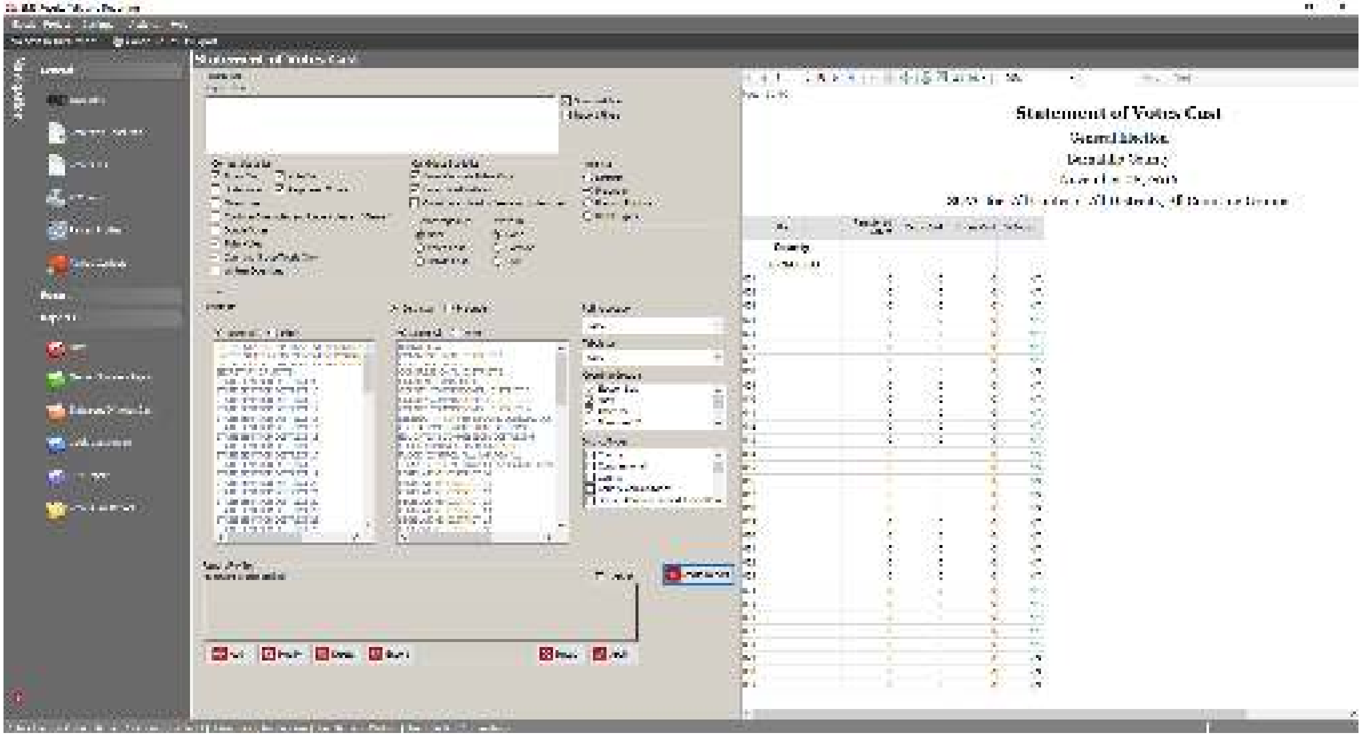
- Filter for Polling Location - From the combo box on the form, the user can filter the report results by polling location.
- Filter for Tabulator - In the combo box on the form, the user can filter the report results by tabulator. the form by which to filter results in the report.
- Filter for Counting Group - From the combo box on the form, the user can filter report results by counting groups.
- Filter for District Type - In the combo box on the form, the user can filter the report results by district.

Sample report screenshots are provided on the following pages.

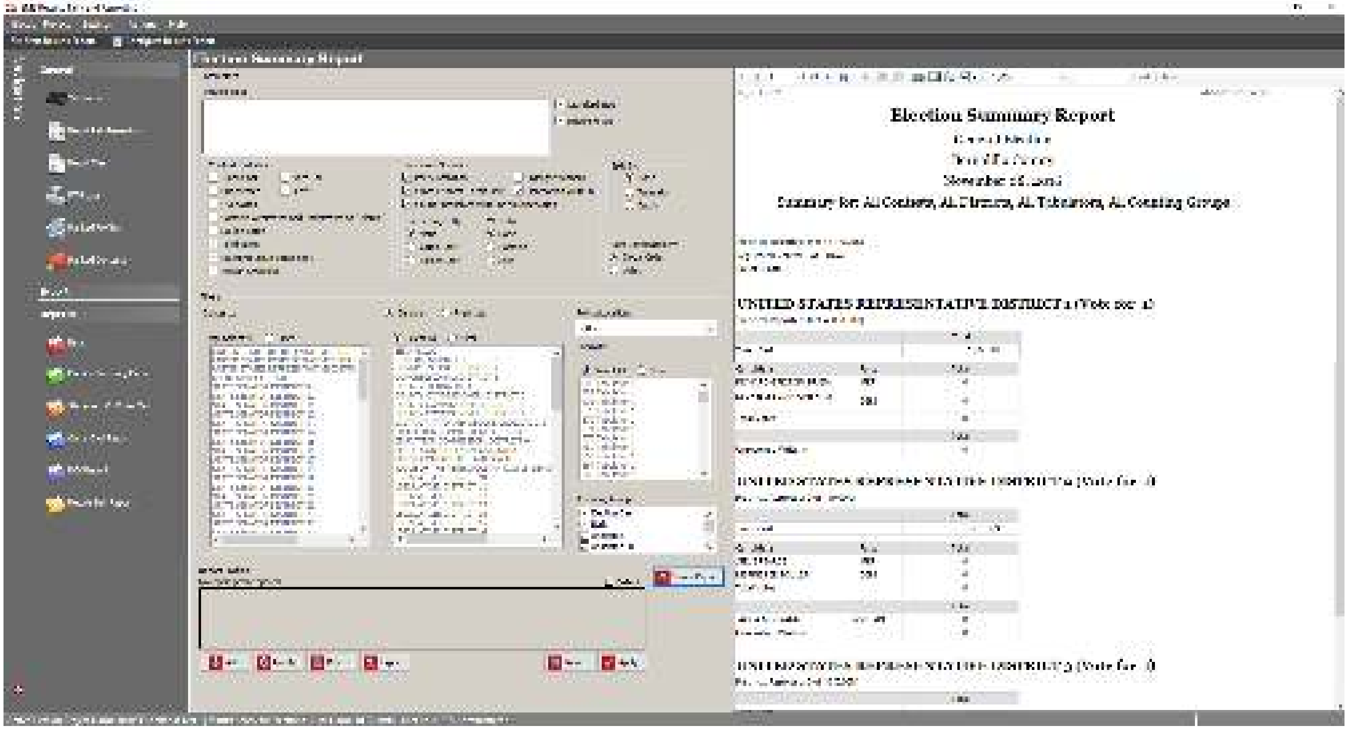
Cards Cast Report



Statement of Votes Cast Report



Election Summary Report



Election Summary Report

Summary for: All Contests, All Districts, All Tabulators, All Counting Groups

UNITED STATES REPRESENTATIVE DISTRICT 1 (Vote for 1)

Clarification Question

How does the CSD support post election audits of the physical ballots cast? What reports or data export capability is there that would allow for tabulation audit comparison of tabulated results and a physical review and count of the paper ballots at the: A. Precinct Level, B. Ballot Box Level, and C. Any other level smaller than a precinct.

Dominion has developed a Ballot Audit and Review Module to assist election officials in performing election canvasses including audits and risk-limiting audits. This tool allows multiple officials to access digital ballot images with their digital ballot AuditMark® records, digital Cast Vote Records, and related review notes. Filtering options enable the creation of ballot review subsets for specific audit reviews, including the ability to filter images of ballots by ballot style, precinct, polling location, contest, and candidate, for the purposes of a recount or post-election audit. This tool resides in a secure post-election environment that is separate from EMS.

Officials can create ballot review sets by filtering for any given audit scenario including specific requests from Election Committees and other internal and external parties. Users may make notes to individual ballots and ballot review sets to aid in follow-up reviews and audit discussions. Administrators may create and assign a ballot review set to a specific election official. Upon reviewing each ballot, officials may add a note, mark it for additional review, or mark it as complete. Ballots within a ballot review set may be sorted against these attributes as desired.

Efficiency is realized through filtering and sorting capabilities. Officials may select specific filter criteria including District, Precinct, Precinct Split, Contest, Candidate, Tabulator, Outstack Conditions, Mark Fill Percentage, Adjudicated, Ballot Type, and or Ballot ID.

Flexibility is realized through user-friendly screen designs to aid in the rapid selection of filters and their choices in both large and small data set scenarios. Furthermore, the Administrator may choose to distribute a large ballot review set across multiple users to speed the review process. This tool will provide efficient and user-friendly interface for reviewing ballot images and associated results, as well as providing a framework to support a variety of auditing methodologies.

For ballots scanned centrally on the ImageCast Central, the ballots are identified by the order in which they were scanned, and are also stored by tabulator, and by batch. Each image is labeled with the tabulator, batch, and sequence number within the batch, which corresponds to the physical ballot in the stack. The AuditMark is appended directly to the image showing how the vote was interpreted at scan time. This AuditMark will also include any adjudications applied to the ballot for voter intent. Even if ballots for a given batch are mixed after scanning, these multiple records provide a way of correlating the digital Cast Vote Record data to the image scanned and finally to the physical paper ballot. While the AuditMark allows ballot-level auditing, it is never tied to the voter.

All ballots scanned are stored and referenced according to the scanning sequence number. Ballot images are each identified by a distinct number. This number consists of the tabulator on which the ballot was scanned, the batch number, and the index of that ballot within the batch. As an example, for the second ballot scanned in batch 245 on Tabulator 4, the scanned image filename would be 0004 0245 0002.tif). If this ballot ever needs to be located in the storage racks, the official must find the transfer case for Tabulator 4, Batch 245, open the box, and locate the second ballot from the top in the box, which will be the desired ballot.

File 4-5 CSD Ease of Use

4.5 Ease of Use for Local Election Officials: Provide and demonstrate customer experiences via referrals and specific case studies or white papers including access, special features, and any other customer feedback.

Dominion works with more than 3,000 entities across North America to provide elections services, software and hardware. We pride ourselves on the partnership that we strive to build with each customer.

In addition to the references we provide in response to 0-7 References, we would like to offer several letters of reference from larger entities that are currently utilizing Democracy Suite and a similar product array as we are proposing in Georgia. Letters from Sacramento County and Contra Costa County, California will provide a high-level overview of the success we have experienced through the implementation and use of our system.

As letters can only provide a snapshot of the user experience, we would also like to provide several links to several testimonial videos produced in conjunction with our customers in the City and County of Denver, and Clark County, Nevada. We feel these video testimonials provide a picture of the type of partnership we commit to developing.

City and County of Denver:

https://www.youtube.com/watch?v=Zyqg-LcAkC0

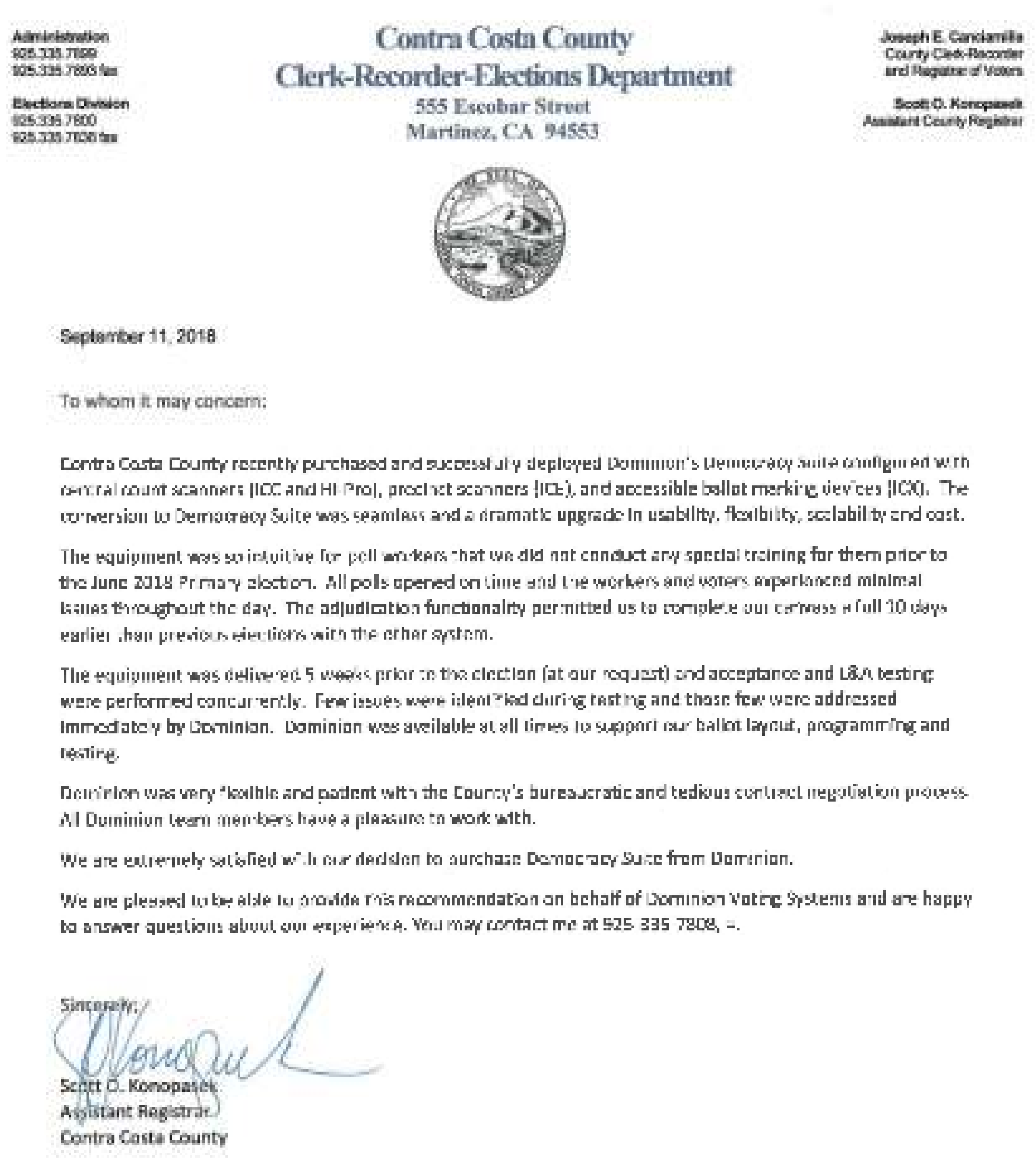
Clark County Video #1 -2018

https://www.youtube.com/watch?v=WejC40bgvic

Clark County Video #2 – 2017

https://youtu.be/j9TsDwsHVPA

Letters of reference provided on the following pages:



Administration
925.335.7899
925.335.7893 fax

Elections Division
925.335.7800
925.335.7806 fax

Contra Costa County
Clerk-Recorder-Elections Department
555 Escobar Street
Martinez, CA 94553

Joseph E. Canciamilla
County Clerk-Recorder
and Registrar of Voters

Scott O. Konopasek
Assistant County Registrar

September 11, 2018

To whom it may concern:

Contra Costa County recently purchased and successfully deployed Dominion's Democracy Suite configured with central count scanners (ICC and HI-Pro), precinct scanners (ICE), and accessible ballot marking devices (ICX). The conversion to Democracy Suite was seamless and a dramatic upgrade in usability, flexibility, scalability and cost.

The equipment was so intuitive for poll workers that we did not conduct any special training for them prior to the June 2018 Primary election. All polls opened on time and the workers and voters experienced minimal issues throughout the day. The adjudication functionality permitted us to complete our canvass a full 10 days earlier than previous elections with the other system.

The equipment was delivered 5 weeks prior to the election (at our request) and acceptance and L&A testing were performed concurrently. Few issues were identified during testing and those few were addressed immediately by Dominion. Dominion was available at all times to support our ballot layout, programming and testing.

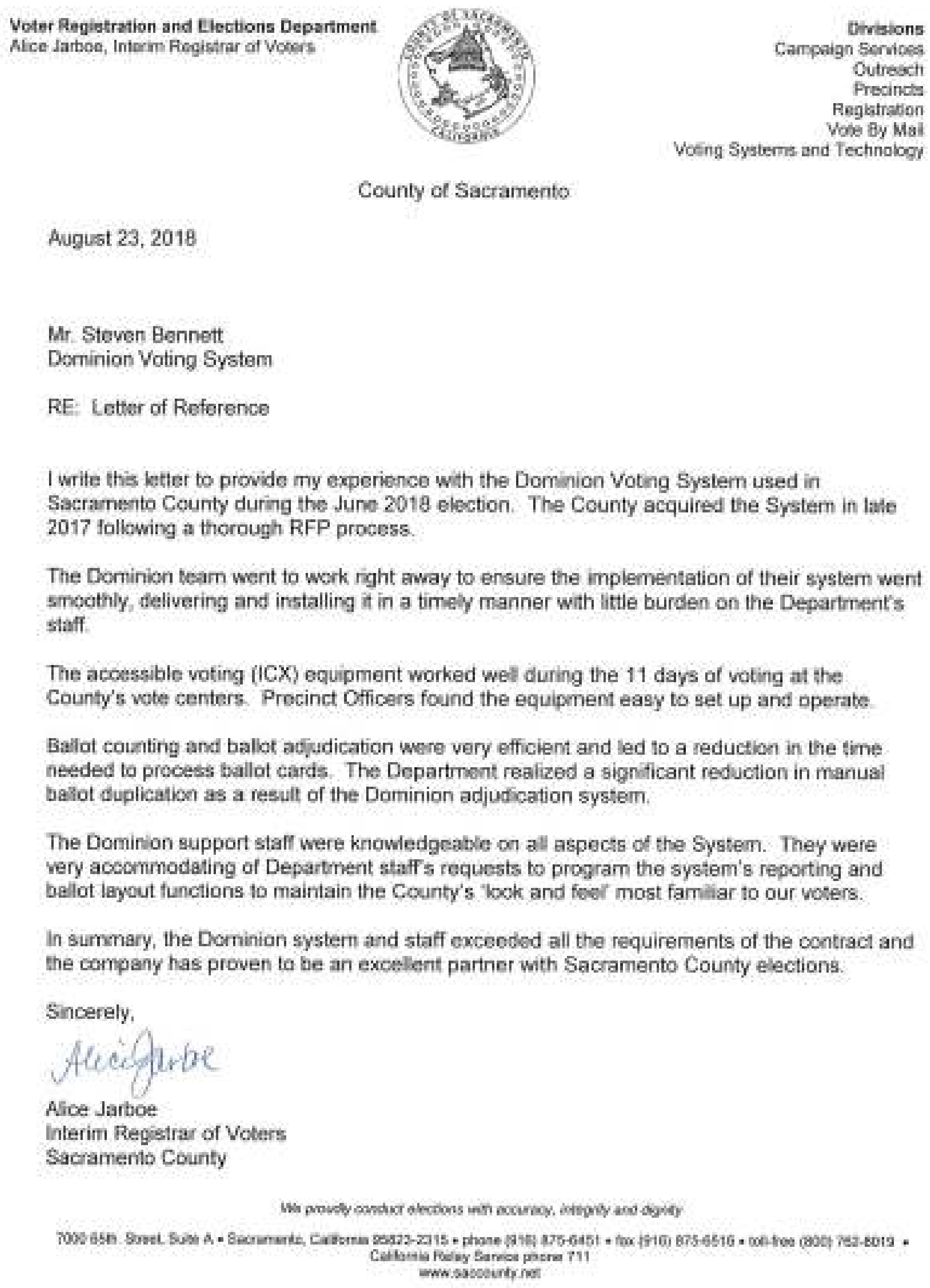
Dominion was very flexible and patient with the County's bureaucratic and tedious contract negotiation process. All Dominion team members have a pleasure to work with.

We are extremely satisfied with our decision to purchase Democracy Suite from Dominion.

We are pleased to be able to provide this recommendation on behalf of Dominion Voting Systems and are happy to answer questions about our experience. You may contact me at 925-335-7808, =.

Sincerely,

Scott O. Konopasek
Assistant Registrar
Contra Costa County



Voter Registration and Elections Department
Alice Jarboe, Interim Registrar of Voters

Divisions
Campaign Services
Outreach
Precincts
Registration
Vote By Mail
Voting Systems and Technology

County of Sacramento

August 23, 2018

Mr. Steven Bennett
Dominion Voting System

RE: Letter of Reference

I write this letter to provide my experience with the Dominion Voting System used in Sacramento County during the June 2018 election. The County acquired the System in late 2017 following a thorough RFP process.

The Dominion team went to work right away to ensure the implementation of their system went smoothly, delivering and installing it in a timely manner with little burden on the Department's staff.

The accessible voting (ICX) equipment worked well during the 11 days of voting at the County's vote centers. Precinct Officers found the equipment easy to set up and operate.

Ballot counting and ballot adjudication were very efficient and led to a reduction in the time needed to process ballot cards. The Department realized a significant reduction in manual ballot duplication as a result of the Dominion adjudication system.

The Dominion support staff were knowledgeable on all aspects of the System. They were very accommodating of Department staff's requests to program the system's reporting and ballot layout functions to maintain the County's 'look and feel' most familiar to our voters.

In summary, the Dominion system and staff exceeded all the requirements of the contract and the company has proven to be an excellent partner with Sacramento County elections.

Sincerely,

Alice Jarboe

Alice Jarboe
Interim Registrar of Voters
Sacramento County

We proudly conduct elections with accuracy, integrity and dignity

7000 65th Street, Suite A • Sacramento, California 95823-2315 • phone (916) 875-6451 • fax (916) 875-6516 • toll-free (800) 762-8019 •
California Relay Service phone 711
www.saccounty.net

Clarification Question

How will the proposed CSD assist Local Election Officials counties in preparing 159 individual databases within 25 business days, where the county has a local race and a statewide race?

The proposed Dominion solution has the proven capability to meet the State's requirement of preparing 159 individual databases for each of Georgia's counties, within 25 business days. Dominion's EMS, Democracy Suite, is currently being used in statewide production environments where a dedicated team of election programmers create the election projects used in multiple counties. In the EMS, template or master election projects will be built in the Election Event Designer (EED) module to streamline the process. These template projects are saved and then used from election to election eliminating the need to create projects from scratch for every county's election event. This includes the downloading of election event information in the proposed CSD, ImageCast Central.

Statewide Ballot Development

Dominion has a dedicated programming team that produces election projects for the following states simultaneously:

- New Mexico – All 33 Counties
- Colorado – 59 of the 64 Counties
- Nevada – 15 of the 16 Counties

The average time frame for this single team to create all the election projects for these 107 counties in 3 different states is

Additional features of Democracy Suite that facilitate an election production environment include:

- EED's built-in Cepstral voice synthesizer is leveraged to automatically generate all the audio needed for ADA-compliant audio ballots, which results in a significant reduction in production time. Human recorded audio can be imported if desired.
- All ballot types including paper absentee, audio, screen, and BMD are created and formatted in a single election project using the EED application.
- All tabulator types including, ImageCast Precinct, ImageCast X-Ballot Marking Device (BMD), and ImageCast Central are defined in and programmed from a single election project using the EED.

There are three primary methods for preparing election databases: Full Import, Partial Import, and No Import.

Methodology #1: Full Import

1. A template or master election project is created.
2. Copies of this election project are created; one for each county.
3. The State provides an import file for each county that contains all the data in all languages, including all associations, for example districts to precincts, links to existing ballot styling templates, and distribution of tabulators.
4. Election data is imported then ballots are laid out.
5. Minor modifications are made as needed and audio ballots are generated using the built-in Cepstral synthesizer.
6. Proofing packages are created and distributed to the counties.
7. Upon approval, ballot artwork is sent to the printers and finalized election projects are tested internally then distributed to the counties.

Finally, counties create the memory cards and USB's needed to load the election onto their voting devices.

Methodology #2: Partial Import

1. A template or master election project is created.
2. Copies of this election project are created, one for each county.
3. The State provides an import file for each county that contains some of the election data, such as associations, for example districts to precincts, needed to build the election.
4. Election data is imported then additional election data is added manually.
5. Ballots are laid out and minor modifications are made as needed.
6. Audio ballots are generated using the built-in Cepstral synthesizer.
7. Proofing packages are created and distributed to the counties.
8. Upon approval, ballot artwork is sent to the printers and finalized election projects are tested internally then distributed to the counties.

Finally, Counties create the memory cards and USB's needed to load the election onto their voting devices.

Methodology #3: No Import

1. A template or master election project is created for each county that contains all of the known static information for the county such as districts and precincts.
2. A copy of each county's template is made and used to build the election.
3. Election specific data is added manually.
4. Then ballots are laid out and minor modifications are made as needed.
5. Audio ballots are generated using the built-in Cepstral synthesizer.
6. Proofing packages are created and distributed to the counties.
7. Upon approval, ballot artwork is sent to the printers and finalized election projects are tested internally then distributed to the counties.

Finally, counties create the memory cards and USB's needed to load the election onto their voting devices.

Conclusion

Dominion will work closely with GASOS to develop a plan the will efficiently and effectively meet the needs of the State's 159 counties. The final plan may consist of any of the methodologies described above, or Dominion will collaboratively work with the State to define a new method.

Dominion is providing four (4) main redundant servers and 12 Client Workstations to the GASOS for the ballot building teams to utilize to the fullest. The amount of equipment provided to GASOS will ensure an efficient turnaround of election flies for distribution to the counties. Additionally, as stated above, Dominion will assist the State in customizing an environment to streamline the overall process including secure and efficient ways for the counties and State to share files.

The GASOS will have 45 BMD's, 18 PPS scanners, and 6 CSD central scanners to test databases prior to sending the data to counties for upload onto their voting devices. Having enough equipment from which to test, will enable the GASOS to build and test county ballots quickly and efficiently. Dominion can offer our Remote Ballot Printing module and ballot printer, so all ballots and test decks can be printed internally for testing by GASOS if necessary. The same module and printer can be offered to all counties, so they may print absentee ballots, test decks, and election day backup ballots internally.

Section 5 – Ballot Marking Device (BMD)

File 5-2 BMD Validation

5.2 Describe any software/firmware validation tools built into the device for use in installation, pre-election, and post-election testing to verify that software/firmware has not been modified.

Democracy Suite integrates a role-based access control system for all software and hardware components. Each user accessing the system is the member of one of the predefined or custom-made roles. Each role has its own set of permissions, or actions that users of that role are allowed to perform. This access control approach provides authentication and authorization services and can be granular according to the jurisdiction’s needs and organization. Complete user and role membership management is integrated within the Democracy Suite EMS Election Event Designer client module.

Further, the ImageCast X protects against unauthorized access or loading of malicious firmware by requiring two-factor authentication for all technician and pollworker menus. In order to gain access, a user must have a valid Technician or Pollworker card and enter an authorized username and password.

As previously detailed, all products in the Democracy Suite platform follow best software and application development practices, including additional source code quality and security procedures. All software programs satisfy recommended coding standards, as well as code styling guidelines as required by EAC VVSG standards. Automated code review processes are in place, that verify compliance with industry accepted coding standards for programming languages. In addition, proper system and software hardening procedures are clearly defined and regularly tested. Testing is performed on the lower source code level using code analysis tools, and at the system level using Nessus vulnerability testing tool. Data integrity and confidentiality is implemented according to NIST defined and FIPS validate procedures and algorithms.

All the code is stored in a secure manner within our organization and regularly backed up. Dominion’s IT personnel further improve overall security through the usage of firewalls, intrusion detection/prevention systems, comprehensive employee training, and company-wide security policies. Continuous integration is performed on a daily basis

along with in-depth testing, which maintains constant code quality. Documentation covers recommended secure configuration scenarios from securing host operating systems (by using antivirus software, firewall configuration, hardening scripts, performing regular updates, and being in an isolated environment) through encryption of application communication mechanisms, hard disk encryption, and election file encryption. Voting locations are physically secured by trained professionals, machines (tabulators) are locked down from modification through the use of appropriate seals and are uniquely identifiable by having appropriate certificates stored for use in authentication.

Dominion uses multi-level assurance and quality control processes to ensure that all elements of our integrated voting system perform properly with every use. Internal acceptance testing is performed on each voting system on receipt from the manufacturer. By the time our products are purchased by the customer, they have gone through three full rounds of acceptance testing. Independent reviews of election databases are conducted to prior Logic and Accuracy testing. We recommend (and support our customers to conduct) precinct-level pre-election testing.

In addition to this rigorous testing and control program designed to catch errors, Dominion Voting regularly conducts process audits of our acceptance testing, and programming processes to ensure that errors never occur.

Clarification Question

A. Does the capability exist to validate the software/firmware on the BMD using hash validation?

B. If yes, what are the steps needed to obtain a HASH value in the following scenarios? Please specify:

- **- Initial Acceptance Testing,**
- **- County Warehouse Pre-Election,**
- **- Polling Place Setup, and**
- **- Post Election review (saved as archived documentation).**

Note: Dominion has elected to not feature this functionality in the requested clarification video due to the sensitive nature of the content, and the potential for it to be subject to an open records request. Dominion would be happy to provide an in-person demo of the Hash validation methodology, in a secure setting, at the GASOS's convenience.

Yes. The capability exists to validate the BMD, ImageCast X BMD, software/firm using hash validation.

File signatures (hash values) for the installation files and installed files that comprise each of the products included in the Democracy Suite 5.5 product group are created by the Voting System Test Laboratory responsible for testing these products. The lists of hash values that are generated for these files are maintained by a U.S. Election Assistance Commission (EAC) designated authority such as the National Software Reference Library (NSRL).

Customers can verify the authenticity of their certified Democracy Suite software and firmware by using a third-party hash value generation tool to generate SHA-256 hash values for these files.

[redacted]

Steps Needed To Obtain ImageCast X BMD Hash Values

The following process features the steps needed to obtain a HASH value in the following scenarios:

- Initial Acceptance Testing,
- County Warehouse Pre-Election,
- Polling Place Setup, and
- Post-Election review (saved as archived documentation).

Extract applications from the ImageCast X Device

[redacted]

[redacted]

Verifying Installed Software on the ImageCast X Device

Perform the following to verify the hash values of the installed software:

[redacted]

[redacted]

Compare each hash value to those listed in the provided Dominion Hash Values documentation for Democracy Suite Installed Files. Alternatively, the generated hash values can be compared against those maintained by the EAC-designated authority. After each hash value has been calculated and verified, the installed software can be considered verified and secure.

After each hash value has been calculated and verified, the installed software can be considered verified and secure.

Section 5 – Ballot Marking Device (BMD)

File 5-4 BMD Ease of Use

5.4 Ease of Use for Local Election Officials and Voters: Provide and demonstrate customer experiences via referrals and specific case studies or white papers including access, special features, and any other customer feedback.

Dominion works with more than 3,000 entities across North America to provide elections services, software and hardware. We pride ourselves on the partnership that we strive to build with each customer.

In addition to the references we provide in response to 0-7 References, we would like to offer several letters of reference from larger entities that are currently utilizing Democracy Suite and a similar product array as we are proposing in Georgia. Letters from Sacramento County and Contra Costa County, California will provide a high-level overview of the success we have experienced through the implementation and use of our system.

As letters can only provide a snapshot of the user experience, we would also like to provide several links to several testimonial videos produced in conjunction with our customers in the City and County of Denver, and Clark County, Nevada. We feel these video testimonials provide a picture of the type of partnership we commit to developing.

City and County of Denver:

https://www.youtube.com/watch?v=Zyqg-LcAkC0

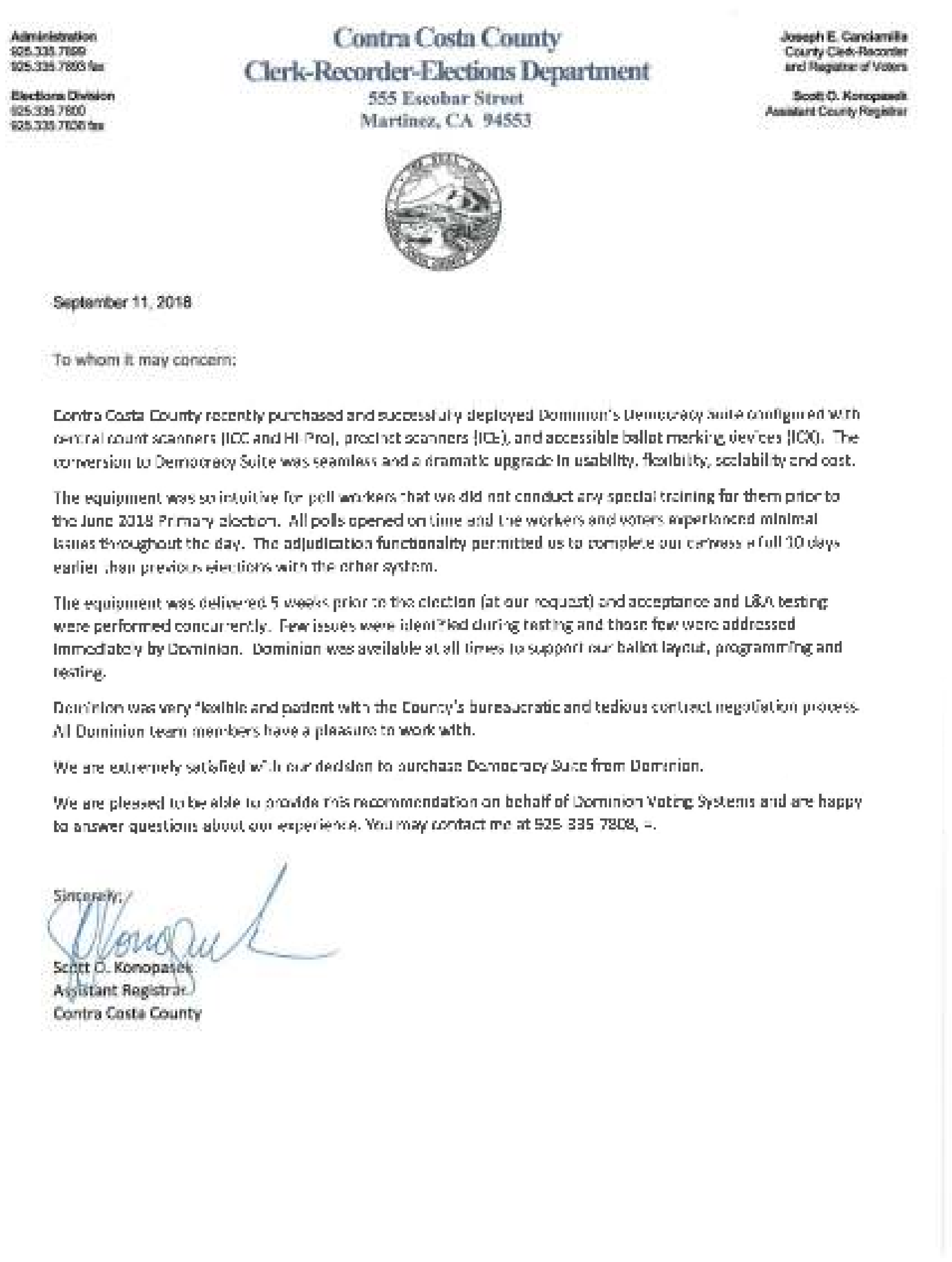
Clark County Video #1 -2018

https://www.youtube.com/watch?v=WejC40bgvic

Clark County Video #2 – 2017

https://youtu.be/j9TsDwsHVPA

Letters of reference provided on the following pages:



Administration
925.335.7899
925.335.7893 fax

Elections Division
925.335.7800
925.335.7836 fax

Contra Costa County
Clerk-Recorder-Elections Department
555 Escobar Street
Martinez, CA 94553

Joseph E. Canciamilla
County Clerk-Recorder
and Registrar of Voters

Scott O. Konopasek
Assistant County Registrar

September 11, 2018

To whom it may concern:

Contra Costa County recently purchased and successfully deployed Dominion's Democracy Suite configured with central count scanners (ICC and HiPro), precinct scanners (ICE), and accessible ballot marking devices (ICX). The conversion to Democracy Suite was seamless and a dramatic upgrade in usability, flexibility, scalability and cost.

The equipment was so intuitive for poll workers that we did not conduct any special training for them prior to the June 2018 Primary election. All polls opened on time and the workers and voters experienced minimal issues throughout the day. The adjudication functionality permitted us to complete our canvass a full 10 days earlier than previous elections with the other system.

The equipment was delivered 5 weeks prior to the election (at our request) and acceptance and L&A testing were performed concurrently. Few issues were identified during testing and those few were addressed immediately by Dominion. Dominion was available at all times to support our ballot layout, programming and testing.

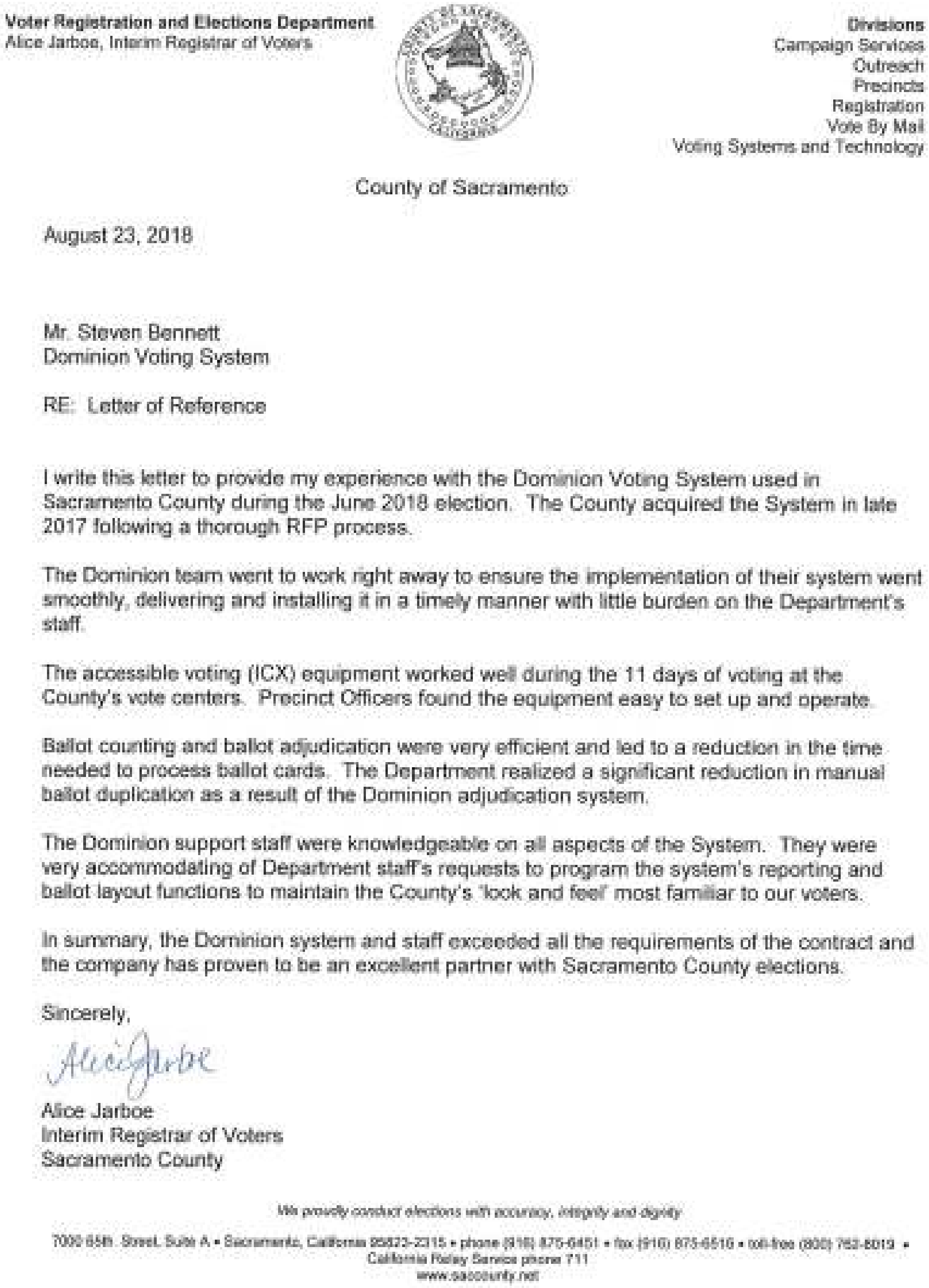
Dominion was very flexible and patient with the County's bureaucratic and tedious contract negotiation process. All Dominion team members have a pleasure to work with.

We are extremely satisfied with our decision to purchase Democracy Suite from Dominion.

We are pleased to be able to provide this recommendation on behalf of Dominion Voting Systems and are happy to answer questions about our experience. You may contact me at 925-335-7808, =.

Sincerely,

Scott O. Konopasek
Assistant Registrar
Contra Costa County



Voter Registration and Elections Department
Alice Jarboe, Interim Registrar of Voters

Divisions
Campaign Services
Outreach
Precincts
Registration
Vote By Mail
Voting Systems and Technology

County of Sacramento

August 23, 2018

Mr. Steven Bennett
Dominion Voting System

RE: Letter of Reference

I write this letter to provide my experience with the Dominion Voting System used in Sacramento County during the June 2018 election. The County acquired the System in late 2017 following a thorough RFP process.

The Dominion team went to work right away to ensure the implementation of their system went smoothly, delivering and installing it in a timely manner with little burden on the Department's staff.

The accessible voting (ICX) equipment worked well during the 11 days of voting at the County's vote centers. Precinct Officers found the equipment easy to set up and operate.

Ballot counting and ballot adjudication were very efficient and led to a reduction in the time needed to process ballot cards. The Department realized a significant reduction in manual ballot duplication as a result of the Dominion adjudication system.

The Dominion support staff were knowledgeable on all aspects of the System. They were very accommodating of Department staff's requests to program the system's reporting and ballot layout functions to maintain the County's 'look and feel' most familiar to our voters.

In summary, the Dominion system and staff exceeded all the requirements of the contract and the company has proven to be an excellent partner with Sacramento County elections.

Sincerely,

Alice Jarboe

Alice Jarboe
Interim Registrar of Voters
Sacramento County

We proudly conduct elections with accuracy, integrity and dignity

7000 65th Street, Suite A • Sacramento, California 95823-2315 • phone (916) 875-6451 • fax (916) 875-6516 • toll-free (800) 762-8019 •
California Relay Service phone 711
www.saccounty.net

Clarification Question

How will the proposed BMD assist Local Election Officials counties in preparing 159 individual databases within 25 business days, where the county has a local race and a statewide race?

The proposed Dominion solution has the proven capability to meet the State's requirement of preparing 159 individual databases for each of Georgia's counties, within 25 business days. Dominion's EMS, Democracy Suite, is currently being used in statewide production environments where a dedicated team of election programmers create the election projects used in multiple counties. In the EMS, template or master election projects will be built in the Election Event Designer (EED) module to streamline the process. These template projects are saved and then used from election to election eliminating the need to create projects from scratch for every county's election event. This includes the downloading of election event information in the proposed BMD, ImageCast X BMD.

Statewide Ballot Development

Dominion has a dedicated programming team that produces election projects for the following states simultaneously:

- New Mexico – All 33 Counties
- Colorado – 59 of the 64 Counties
- Nevada – 15 of the 16 Counties

The average time frame for this single team to create all the election projects for these 107 counties in 3 different states is

Additional features of Democracy Suite that facilitate an election production environment include:

- EED's built-in Cepstral voice synthesizer is leveraged to automatically generate all the audio needed for ADA-compliant audio ballots, which results in a significant reduction in production time. Human recorded audio can be imported if desired.
- All ballot types including paper absentee, audio, screen, and BMD are created and formatted in a single election project using the EED application.
- All tabulator types including, ImageCast Precinct, ImageCast X-Ballot Marking Device (BMD), and ImageCast Central are defined in and programmed from a single election project using the EED.

There are three primary methods for preparing election databases: Full Import, Partial Import, and No Import.

Methodology #1: Full Import

1. A template or master election project is created.
2. Copies of this election project are created; one for each county.
3. The State provides an import file for each county that contains all the data in all languages, including all associations, for example districts to precincts, links to existing ballot styling templates, and distribution of tabulators.
4. Election data is imported then ballots are laid out.
5. Minor modifications are made as needed and audio ballots are generated using the built-in Cepstral synthesizer.
6. Proofing packages are created and distributed to the counties.
7. Upon approval, ballot artwork is sent to the printers and finalized election projects are tested internally then distributed to the counties.

Finally, counties create the memory cards and USB's needed to load the election onto their voting devices.

Methodology #2: Partial Import

1. A template or master election project is created.
2. Copies of this election project are created, one for each county.
3. The State provides an import file for each county that contains some of the election data, such as associations, for example districts to precincts, needed to build the election.
4. Election data is imported then additional election data is added manually.
5. Ballots are laid out and minor modifications are made as needed.
6. Audio ballots are generated using the built-in Cepstral synthesizer.
7. Proofing packages are created and distributed to the counties.
8. Upon approval, ballot artwork is sent to the printers and finalized election projects are tested internally then distributed to the counties.

Finally, Counties create the memory cards and USB's needed to load the election onto their voting devices.

Methodology #3: No Import

1. A template or master election project is created for each county that contains all of the known static information for the county such as districts and precincts.
2. A copy of each county's template is made and used to build the election.
3. Election specific data is added manually.
4. Then ballots are laid out and minor modifications are made as needed.
5. Audio ballots are generated using the built-in Cepstral synthesizer.
6. Proofing packages are created and distributed to the counties.
7. Upon approval, ballot artwork is sent to the printers and finalized election projects are tested internally then distributed to the counties.

Finally, counties create the memory cards and USB's needed to load the election onto their voting devices.

Conclusion

Dominion will work closely with GASOS to develop a plan the will efficiently and effectively meet the needs of the State's 159 counties. The final plan may consist of any of the methodologies described above, or Dominion will collaboratively work with the State to define a new method.

Dominion is providing four (4) main redundant servers and 12 Client Workstations to the GASOS for the ballot building teams to utilize to the fullest. The amount of equipment provided to GASOS will ensure an efficient turnaround of election flies for distribution to the counties. Additionally, as stated above, Dominion will assist the State in customizing an environment to streamline the overall process including secure and efficient ways for the counties and State to share files.

The GASOS will have 45 BMD's, 18 PPS scanners, and 6 CSD central scanners to test databases prior to sending the data to counties for upload onto their voting devices. Having enough equipment from which to test, will enable the GASOS to build and test county ballots quickly and efficiently. Dominion can offer our Remote Ballot Printing module and ballot printer, so all ballots and test decks can be printed internally for testing by GASOS if necessary. The same module and printer can be offered to all counties, so they may print absentee ballots, test decks, and election day backup ballots internally.

Section 5 – Ballot Marking Device (BMD)

File 5-6 BMD ADA

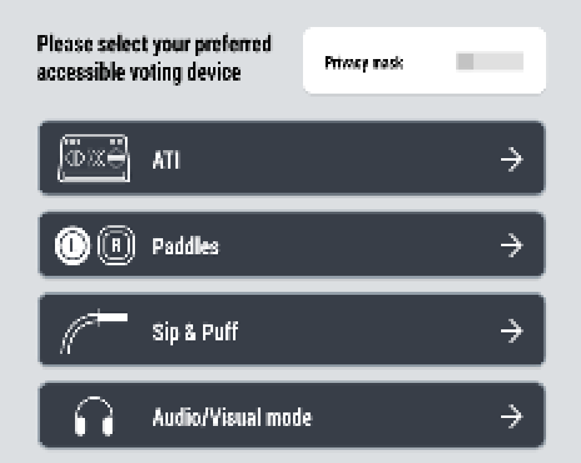
5.6 Describe how the proposed BMD will support ADA accessibility.

The ImageCast X can be placed on a voting booth or table designed for compliance with ADA accessibility.

As detailed in response to item 5-1 BMD, the unit was designed as a voting solution for all, the ImageCast X also offers several options for voters with accessibility needs to vote in a private and independent manner. The ImageCast X offers the following user interfaces:

- Visual mode: Voter navigates their ballot using one of the available accessibility tools and the visual display
- Audio mode: Visual display can be disabled, and the voter uses headphones to navigate an audio ballot using one of the available accessibility tools
- Visual & audio mode: Voter navigates their ballot using one of the available accessibility tools, the visual display, and the audio ballot

In addition to the touchscreen functionality, the ImageCast X is compatible with a range of accessibility tools that voters can use to navigate through the ballot and make their selections. The system is compatible with commercially available accessibility devices, such as a four-way joystick, as well as a hand-held controller called the Audio Tactile Interface (ATI), sip and puff device, or paddle device.



Please select your preferred accessible voting device

The ImageCast X is compatible with a range of accessibility tools and can present the ballot in audio only, visual only or both audio/visual mode.

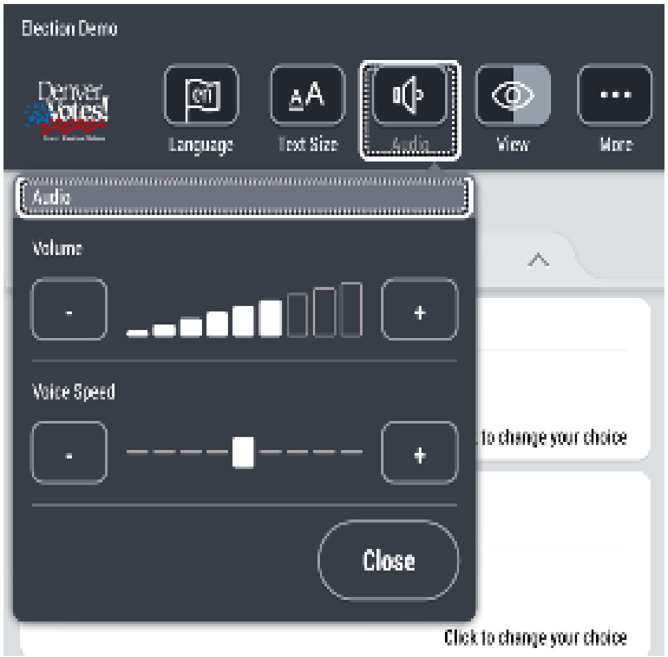
The Audio Tactile Interface (ATI) is the handheld device that is used by a voter during an Accessible Voting Session to navigate through and make selections to their ballot. The ATI:

- Has raised keys that are identifiable tactilely without activation (i.e. raised buttons of different shapes and colors, large or Braille numbers and letters)
- Can be operated with one hand
- Includes a 3.5 mm headphone jack
- Includes a T-Coil coupling
- Has a T4 rating for interference
- Uses light pressure switches
- Can be equipped with a pneumatic switch, also known as a sip and puff device, or a set of paddles.

The ImageCast X can present the ballot in audio only, visual only, or both audio and visual modes, depending on personal preference. Voters can adjust the rate and volume of their audio ballot, as well as the text size and contrast of the display, or disable the display entirely for added privacy. Every voter configurable option is automatically reset to its default value with the initiation of each new voting session.

Voters are able to review, verify and correct their selections prior to printing their ballot, by audio and/or visual means. Voters are warned if they have missed, or undervoted a contest, and have the opportunity to go back and correct their selections. Once the ballot is printed, the voter scans their ballot on the ImageCast Precinct, the same as all other voters.

Deployed widely across California, Nevada, Colorado and Michigan, the ImageCast X has received the highest usability ranking by in-person voters with disabilities. The ImageCast X features the latest technological advances in accessible voting technology, providing more options for voters with accessibility needs to vote privately and independently.



Voters can adjust the rate and volume of their audio ballot.

Clarification Question

What specific functionality of the voting system shall "be accessible for individuals with disabilities, including nonvisual accessibility for the blind and visually impaired, in a manner that provides the same opportunity for access and participation (including privacy and independence) as for other voters consistent with federal laws and regulations.

The proposed voting system meets all standards for accessible voting as required by federal guidelines and regulations. Dominion's Democracy Suite 5.5A software and hardware components were designed to meet all established requirements for Americans with Disabilities Act (ADA) features based on the requirements set forth in:

- Voluntary Voting System Guidelines (VVSG 1.1), Section 3.3 Accessibility Requirements
- Help America Vote Act (HAVA), Section 301. Voting Systems Standards

The following pages will detail how the proposed ballot marking device (BMD), ImageCast X BMD, enables individuals with disabilities the same opportunity for access and participation (including privacy and independence) as for other voters consistent with the federal laws and regulations listed above.

ImageCast X BMD

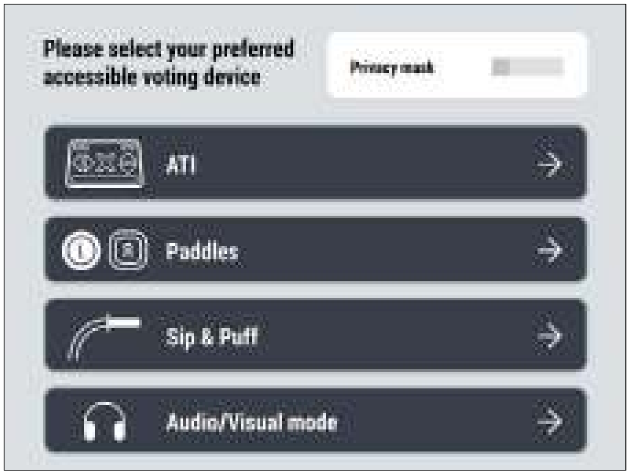
The ImageCast X BMD allows for the addition of a “plug and play” Audio-Tactile Interface, to provide HAVA compliant accessibility to the unit. Ballots generated by the ImageCast X BMD will be fed into the ImageCast Precinct for tabulation with other paper ballots.

The ImageCast X leverages the flexibility of COTs technology to support a variety of accessibility features for individuals with disabilities.

The ImageCast X leverages commercially available technologies and is driven by Dominion’s secure and flexible Democracy Suite platform. The use of compact, commercially available hardware makes the ImageCast X a cost-effective and versatile in-person voting solution. It requires less space to warehouse, is more affordable than larger proprietary solutions, and offers full ADA compliance.

The ImageCast X has an intuitive touchscreen interface with various features for accessibility and connects to a printer that prints the voter’s ballot directly in the voting booth. Once the ballot is printed, it is placed in a secrecy folder, and the voter scans their ballot on the ImageCast Precinct, the same as all other voters.

ImageCast X BMD Accessibility



Please select your preferred accessible voting device

Designed as a voting solution for all, the ImageCast X also offers several options for voters with accessibility needs to vote in a private and independent manner. The ImageCast X offers the following user interfaces:

- **Visual Mode:** Voter navigates their ballot using one of the available accessibility tools and the visual display.
- **Audio Mode:** Visual display can be disabled and the voter uses headphones to navigate an audio ballot using one of the available accessibility tools.

The ImageCast X is compatible with a range of accessibility tools that allow individuals with disabilities the same opportunity for access and participation.

- **Visual and Audio Mode:** Voter navigates their ballot using one of the available accessibility tools, the visual display, and the audio ballot.

ImageCast X BMD Privacy

The ImageCast X BMD Voting Booth provides any voter with privacy to access their ballot. The three-sided booth holds the ImageCast X BMD and its corresponding ballot printer. This ensures the voter has an appropriate environment to review the ballot, make selections, and print their marked ballot. The unit is designed so that any voter in a wheelchair can pull forward to the unit or by the side.

Additionally, as mentioned above, the ImageCast BMD offers an Audio Mode interface, which disables the touchscreen. This allows visually impaired voters to listen to the audio ballot via headphones, while making their selections with ATI, providing them complete privacy while voting.

ImageCast X BMD Voter Independence with the Audio-Tactile Interface

In addition to the touchscreen functionality, the ImageCast X is compatible with a range of accessibility devices that voters can use to navigate through the ballot and mark their selections. The system is compatible with Dominion's hand-held controller called the Audio-Tactile Interface (ATI), sip and puff device, or a 2-switch paddle device. The ATI is the handheld device that is used by a voter during an Accessible Voting Session to navigate through and make selections to their ballot. The ATI:

- Has raised keys that are identifiable tactilely without activation (i.e. raised buttons of different shapes and colors, large or Braille numbers and letters)
- Can be operated with one hand
- Includes a 3.5mm headphone jack
- Includes a T-Coil coupling
- Has a T4 rating for interference
- Uses light pressure switches
- Can be equipped with a pneumatic switch, also known as a sip and puff device, or a set of paddles

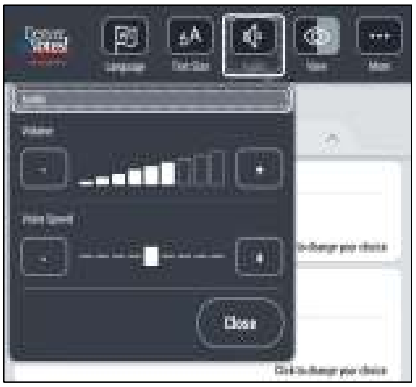
The ATI provides voters with audio instructions to perform all actions, such as selecting language, adjusting volume and speed of ballot, and reviewing, editing or changing a write-in. Fast-forwarding through instructions, for example, would be accomplished by pressing the blue, triangle, down arrow (each button on the ATI is labeled in braille). Similarly, to all other voting sessions on the ImageCast X BMD, voters have the ability to verify their selections through the ballot review process using the ATI.

The voter using audio will select a contest that they wish to vote in by pressing the Red "X" select button, then listen to the choices and press the Red "X" select button to record their selection. The system will review this selection and instruct the voter how to correct if there was a mistake or move to the next contact. Once the voter has completed the ballot, the system will take them through a review screen where the voter has the ability to make further changes to any selections before printing the ballot.

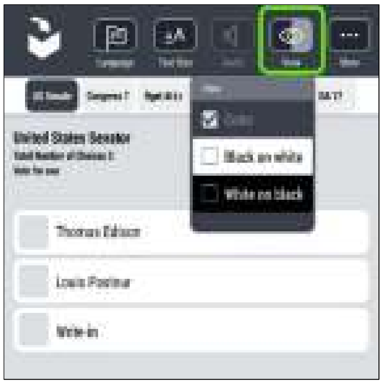
ImageCast X BMD Audio and Visual Flexibility

The ImageCast X BMD allows voters to adjust the visual and audio presentation of their ballots. Voters can adjust the rate and volume of their audio ballot, as well as the text size and contrast of the display, or disable the display entirely for added privacy. All of these adjustments can be made either with the ImageCast X BMD touchscreen or the ATI.

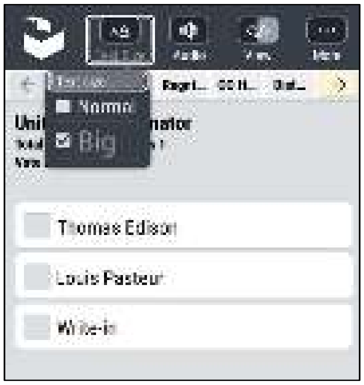
Every voter configurable option is automatically reset to its default value with the initiation of each new voting session.



Voters can adjust the rate and volume of their audio ballot.



Voters can adjust the contrast to white on black.



Voters can select text to be "Normal" of "Big".

llot]

Voters are able to review, verify and correct their selections prior to printing their ballot, by audio and/or visual means. Voters are warned if they have missed, or undervoted a contest, and have the opportunity to go back and correct their selections. Once the voter has reviewed their ballot and has confirmed they are ready to print, the ImageCast X can print a paper ballot which contains a written summary of the voter's choices. The ballot that is printed from the ImageCast X during an accessible voting session is the same as a ballot printed during a standard voting session, ensuring voter privacy and ballot secrecy. The printout includes a 2D barcode and readable format for audit purposes. At no time is voter identifiable information stored on the redundant memory cards or on the printed-paper record.

The ImageCast X features the latest technological advances in accessible voting technology, providing more options for voters with accessibility needs to vote privately and independently.

The ImageCast X BMD allows all voters the chance to cast their ballot in private. It truly is a voting solution for all.

Section 6 – EPoll Data Management System (EPDMS)

File 6-2 EPDMS Media

6.2 Describe how election configuration information is loaded. Is it done via encrypted, removable memory devices created by the EPDMS or through direct a connection to EPDMS through a LAN?

ePulse, KNOWiNK's EPDMS, provides the option of using iSync encrypted removable memory devices, transferring the data via network connectivity from the central GASOS office or a LAN connection to securely transfer election configuration information from ePulse to the Poll Pad. In ePulse, an election administrator with proper credentials is provided a workflow to guide them through the process of properly uploading a voter file.

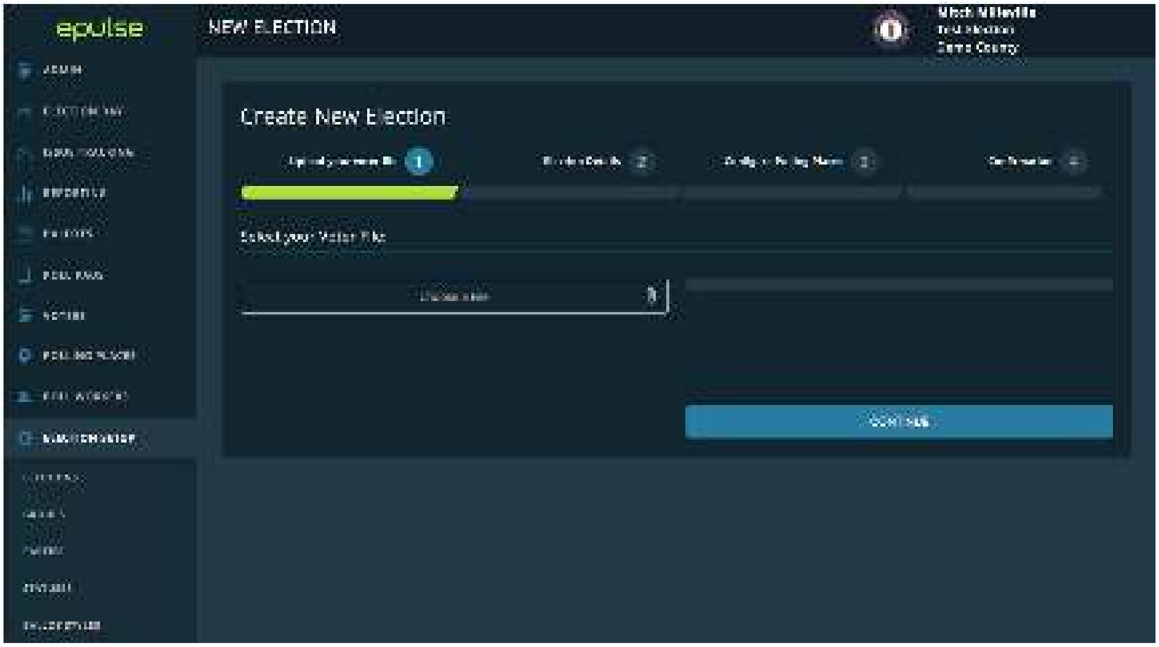


Figure 6-2-1. ePulse election file import. Once the file is selected, the user clicks Continue and the upload begins. ePulse is built to support VRS files natively, so that creating an election in the Poll Pad is completely seamless. Users are able to customize import flags such as statuses and absentee information at the State's discretion.

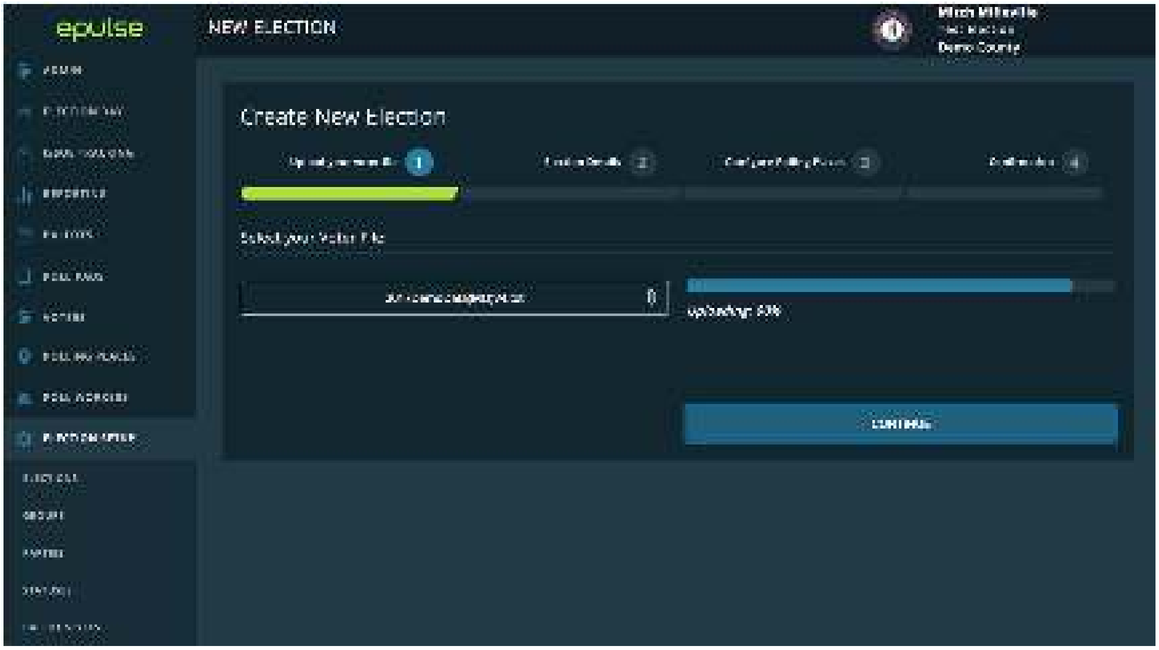


Figure 6-2-2. ePulse election file import. Once the file is selected, the user clicks Continue and the upload begins. ePulse is built to support VRS files natively, so that creating an election in the Poll Pad is completely seamless. Users are able to customize import flags such as statuses and absentee information at the State's discretion.

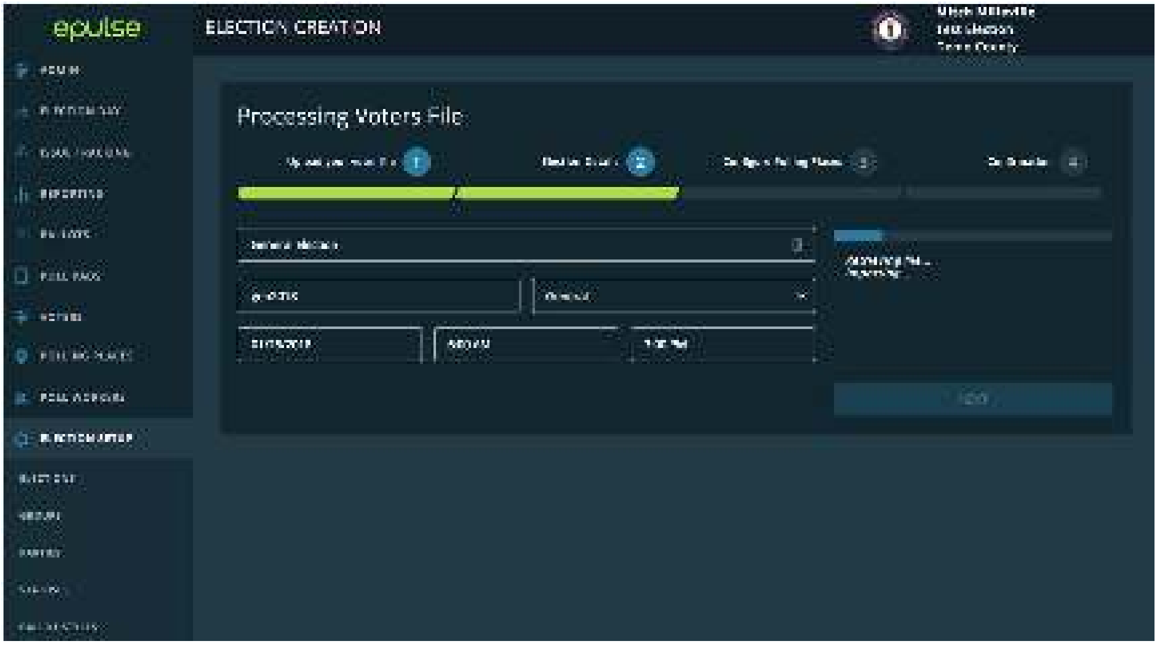


Figure 6-2-3. Election Details. The ePulse user enters in the election details, including election type, date, and poll open and closing times. This establishes the initial voter file and specific election details for your Election. Any subsequent data that is loaded will make supplemental changes to your Election and will be available to be disseminated to the Poll Pads. Supplemental updates can be distributed to the Poll Pads via wireless internet connectivity or iSync drive.

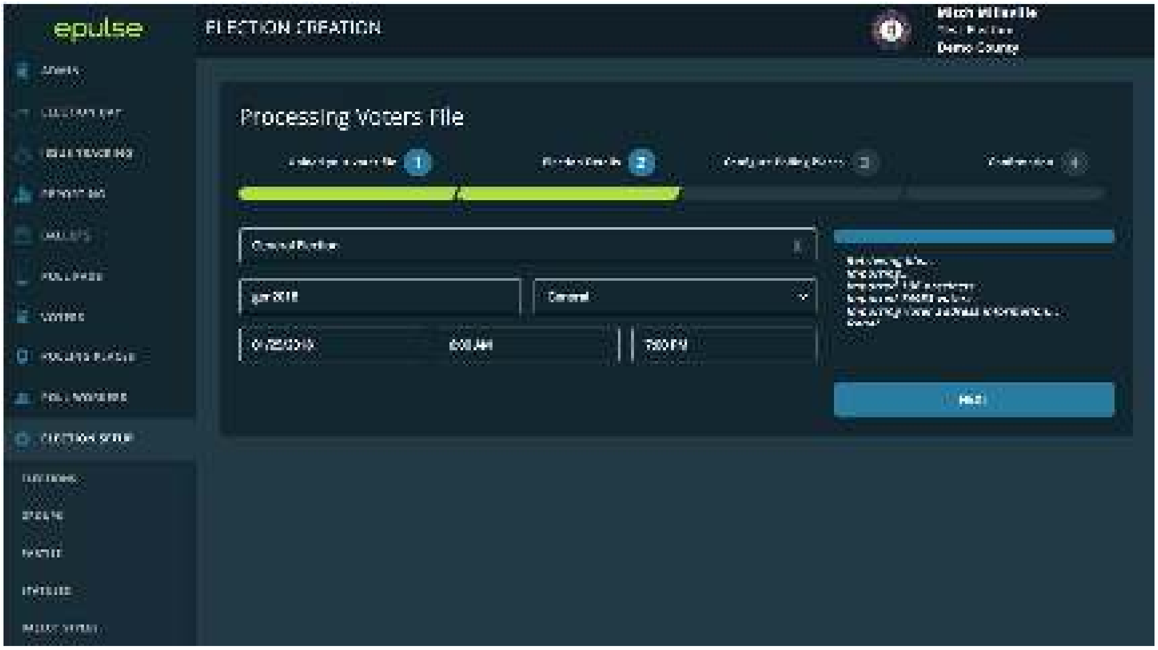


Figure 6-2-4. Election Detail Confirmation. ePulse automatically provides status updates on the imported file's progress and verifiable statistics to ensure the data uploaded matches county records. Once complete, the user clicks Next.

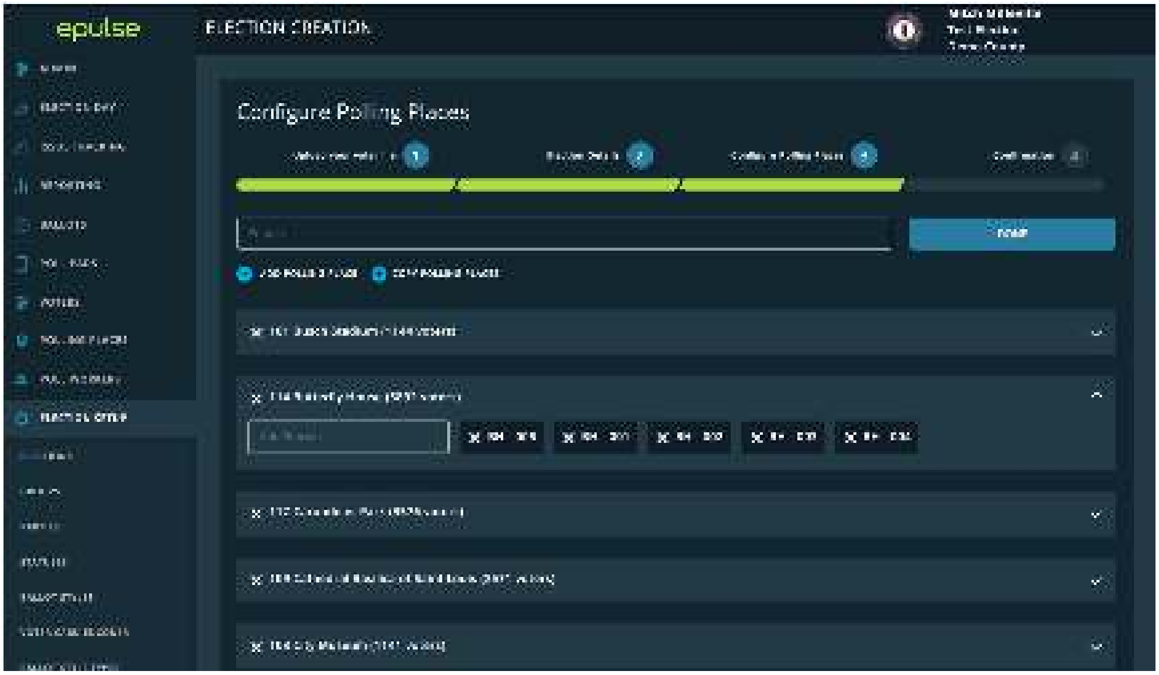


Figure 6-2-5. Configure Polling Places. The third step is reviewing the imported list of polling places. The user may customize the configuration for each Polling Place and precinct. Various combinations of polling locations can be manually added or imported in bulk into ePulse for use during an election. Vote centers, early absentee locations, or precinct specific locations are the most common types but we are also able to work with the State to set up a unique offering at your request.

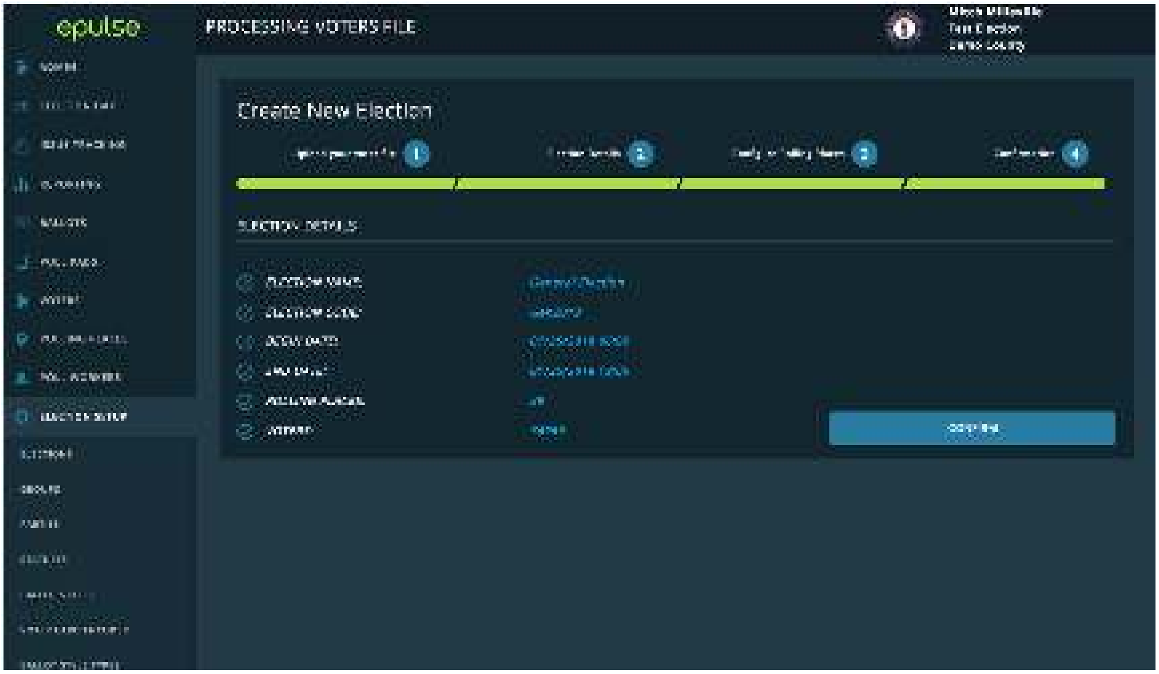
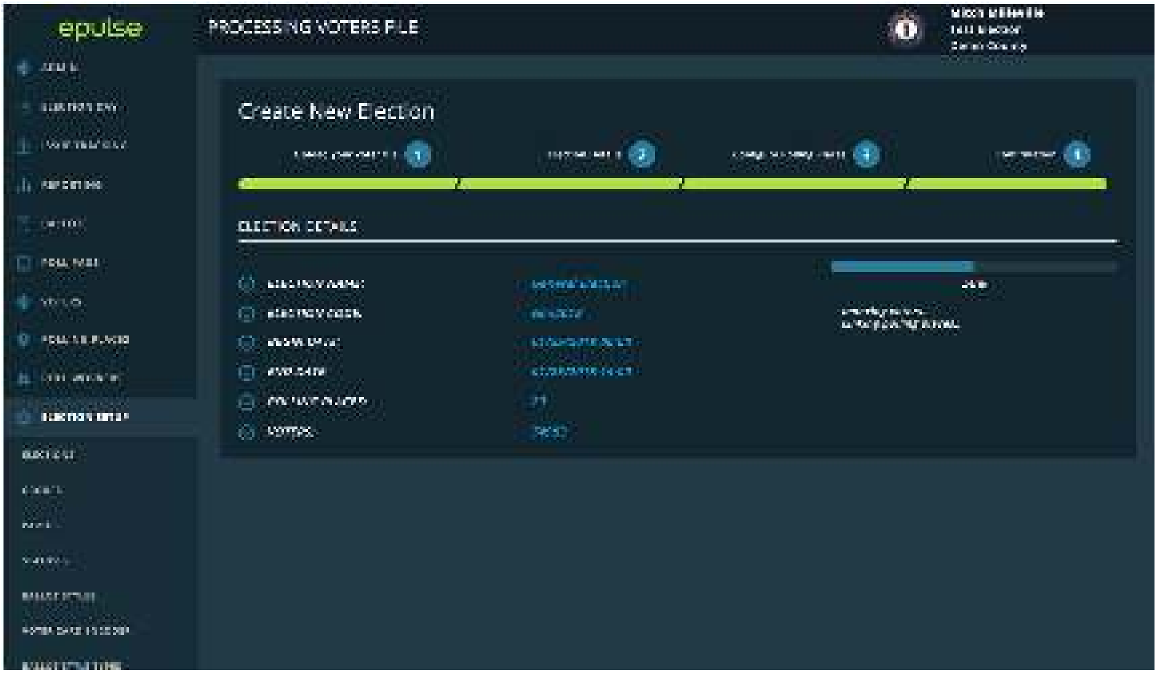


Figure 6-2-6. Election Setup Confirmation. The Confirmation page provides a summary report of the new election details. The user reviews and clicks Confirm. The Confirmation page provides a secondary summary report of the new election details and statistics for final verification. The user confirms the information displayed and clicks Confirm to finalize the initial database to be used in the Election.



6-2-7. Final Configuration. ePulse begins indexing the voters and links voter records to the correct polling places. ePulse allows the upload of supplemental data and rosters from a VRS. Once loaded, the changes enacted by the supplemental file are then disseminated to the Poll Pad application via wireless hotspot connectivity or barcode scanning for near real-time updating of voter records.

Clarification Question

> **Is the EPDMS housed on a CPU that can be hosted on premise and air gapped? If the EPDMS is designed to be hosted, please describe if it is possible to run the EPDMS in a private cloud configuration, separated from other customers?**

The EPDMS (ePulse) is designed to be hosted on a cloud service, specifically Amazon Web Services (AWS). KNOWiNK has implemented ePulse using AWS in nearly 600 jurisdictions. KNOWiNK prefers AWS for its vast scalability, security, and cost effectiveness. If a private cloud solution within AWS is desired, KNOWiNK will set up a dedicated Georgia environment that only hosts the Georgia system, separate from all of KNOWNK's existing client's instances. This has been done for multiple jurisdictions in prior deployments. Deployment and preparation of Poll Pad devices may still be accomplished with air-gapped methodology; these methods are described in 6-4.

Section 6 – EPoll Data Management System (EPDMS)

File 6-4 EPDMS Ease of Use

6.4 Ease of Use for the State and Election Official: Provide and demonstrate customer experiences via referrals and specific case studies or white papers including access, special features, and any other customer feedback.

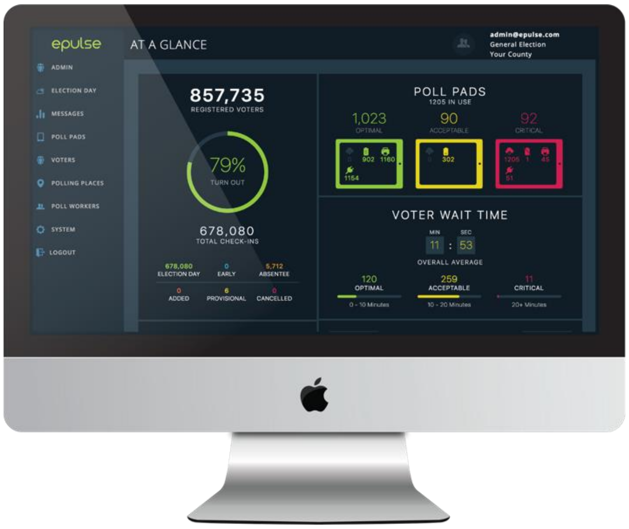
ePulse® – KNOWiNK's Central Command Back-End

ePulse is a secure web-based back-end election management system for use at the State and county level.

ePulse is an all-inclusive election management suite designed to give administrators real-time access to monitor their election as a whole. All Poll Pads connect to this central hub where voter check-in data is securely transferred via WiFi or cellular networks in near real time. This tool allows for administrators to oversee the operation of individual precincts and Poll Pads including battery life of the device, average check-in times, number of ballots issued or spoiled and more; all the while ensuring the election authority can directly contact poll workers via video or text message for speedy trouble resolution.

ePulse Capabilities

- Customizable real-time and
- election night reporting
- Ballot tracking
- Inventory tracking
- Election Day issue tracking
- Poll worker time-tracking
- Video communications from
- Poll Pads to ePulse
- Run concurrent elections
- Update voter rolls minutes before an election



ePulse election monitoring dashboard. ePulse aims to be as intuitive and user-friendly as the Poll Pads themselves. These simple-to view dashboards give the user an overview of election data essentials which can be easily digested and exported into customizable reports.

ePulse has numerous modules that give each County a complete view to manage elections. The following pages highlight the major Poll Pad features and ePulse modules that come with the Poll Pad solution.

> "The Poll Pad solution and KNOWiNK customer service consistently meet Denton County's unique needs. ePulse allows us to change a voter from one ballot style to another, a feature we could not do with our previous system. We highly recommend KNOWiNK's Poll Pad solution."
>
> – Frank Phillips, Election Administrator, Denton County, Texas

ePulse is easy to use and can be taught to county officials and GASOS personnel is a half-day or less.

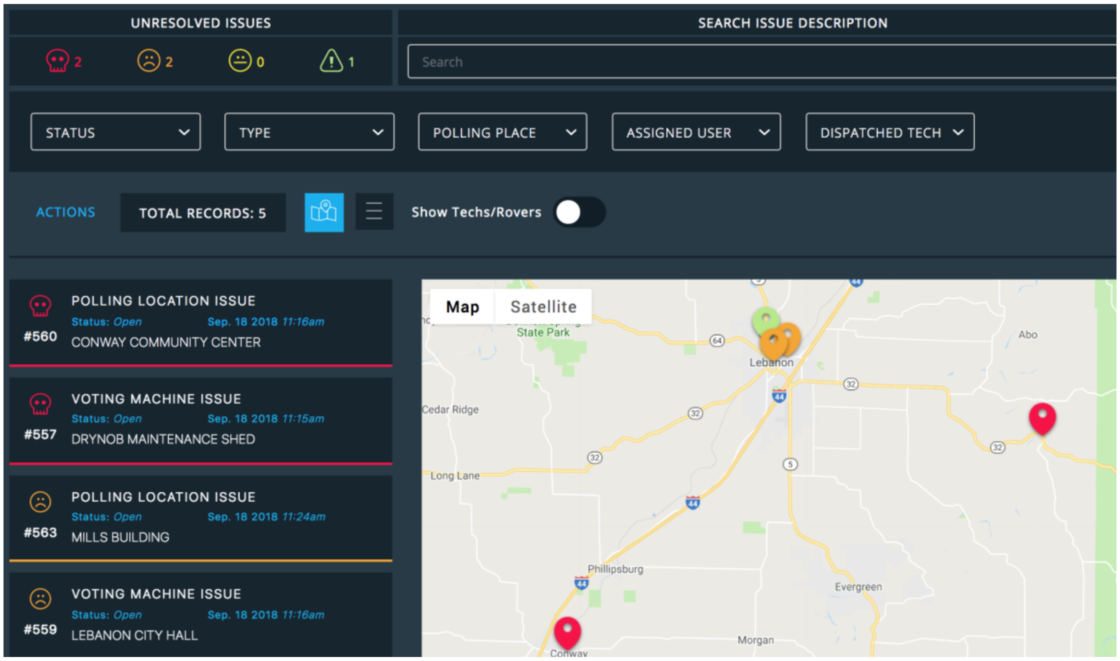
Special features of ePulse and specific use cases are shown on the following pages.

ePulse Module: iTrack Issue Tracking

ePulse provides a method to assign election incident reports to help desk technicians and track their resolution. iTrack is a module built into ePulse and is divided into incident tracking and incident viewing/reporting. Reporting an incident allows the user to assign incidents to specific technicians, as well as detail what devices were affected by the incident, in which polling location or vote center, and whether the incident is open, pending, or closed. Issue creation, updates, and close are all timestamped, and the user that performed each event is logged in the system. iTrack allows for a method to track technicians and their GPS coordinates via a smartphone application that runs on iOS and Android operating systems.

KNOWiNK provides in-depth training and troubleshooting guides for in-office tech support and on-site personnel. Tech support personnel in the election office access the iTrack Issue Tracking system to log issues, assign them to devices and poll workers, and deploy techs out to the field to resolve incidents on-site. Using iTrack, Tech Support can communicate with poll workers via text messaging and video chat to get a first-hand understanding of what the poll worker is encountering. iTrack is available in ePulse on a web browser and as a mobile application.

Figure 3. Issue Tracking Screenshots



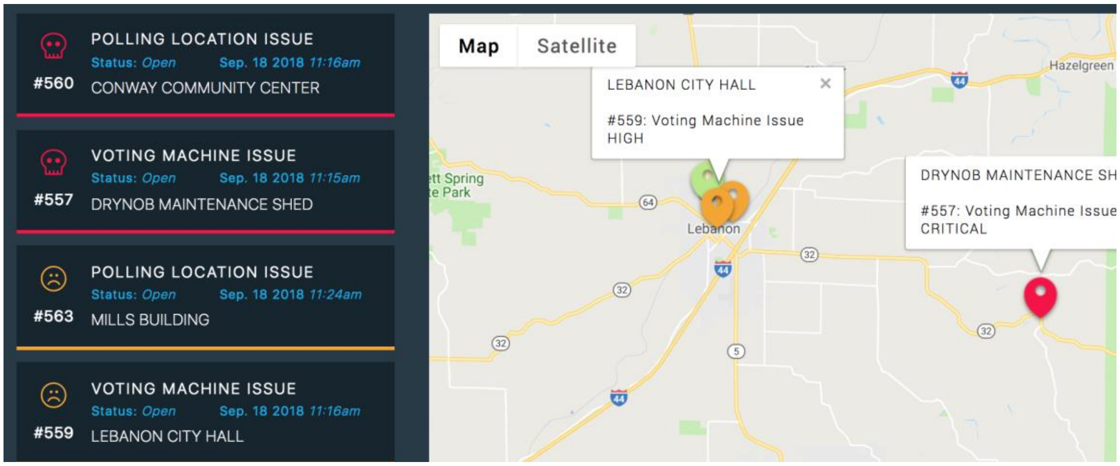
POLLING LOCATION ISSUE
Status: Open Sep. 18 2018 11:16am
#560 CONWAY COMMUNITY CENTER

VOTING MACHINE ISSUE
Status: Open Sep. 18 2018 11:15am
#557 DRYNOB MAINTENANCE SHED

POLLING LOCATION ISSUE
Status: Open Sep. 18 2018 11:24am
#563 MILLS BUILDING

VOTING MACHINE ISSUE
Status: Open Sep. 18 2018 11:16am
#559 LEBANON CITY HALL

Figures 3.1 and 3.2. iTrack Issue Tracking Screenshots. Birds Eye View and Summary of Incidents.



POLLING LOCATION ISSUE
Status: Open Sep. 18 2018 11:16am
#560 CONWAY COMMUNITY CENTER

VOTING MACHINE ISSUE
Status: Open Sep. 18 2018 11:15am
#557 DRYNOB MAINTENANCE SHED

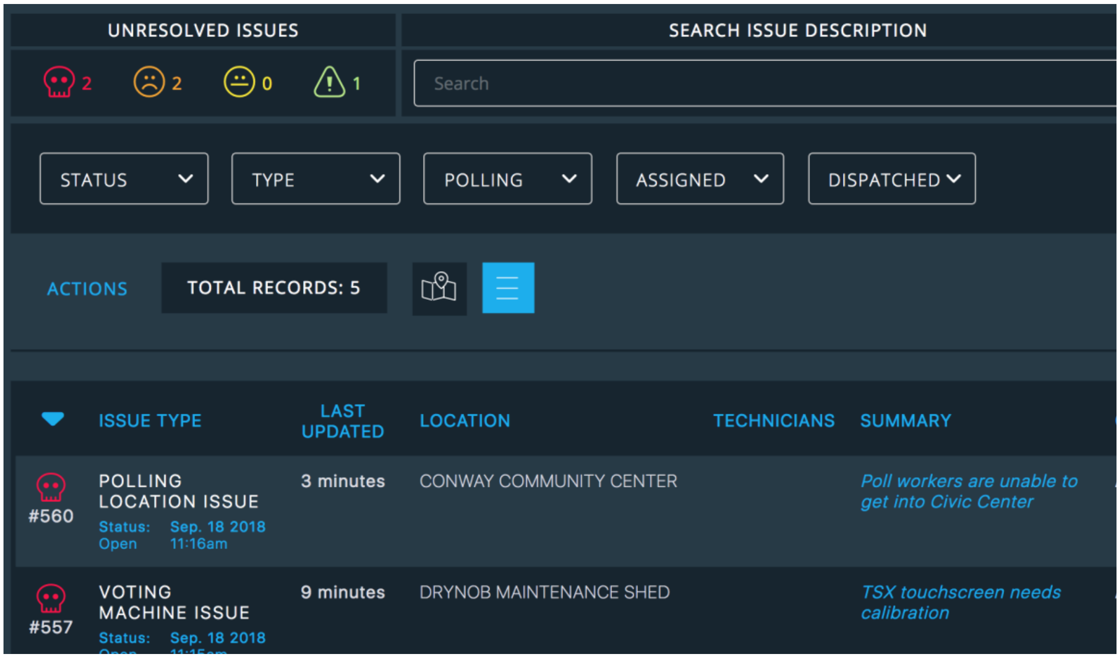
POLLING LOCATION ISSUE
Status: Open Sep. 18 2018 11:24am
#563 MILLS BUILDING

VOTING MACHINE ISSUE
Status: Open Sep. 18 2018 11:16am
#559 LEBANON CITY HALL

LEBANON CITY HALL
#559: Voting Machine Issue
HIGH

DRYNOB MAINTENANCE SH
#557: Voting Machine Issue
CRITICAL

Figure 3.3. iTrack Issue Tracking Screenshots. List view of incidents.



UNRESOLVED ISSUES

2 2 0 1

SEARCH ISSUE DESCRIPTION

Search

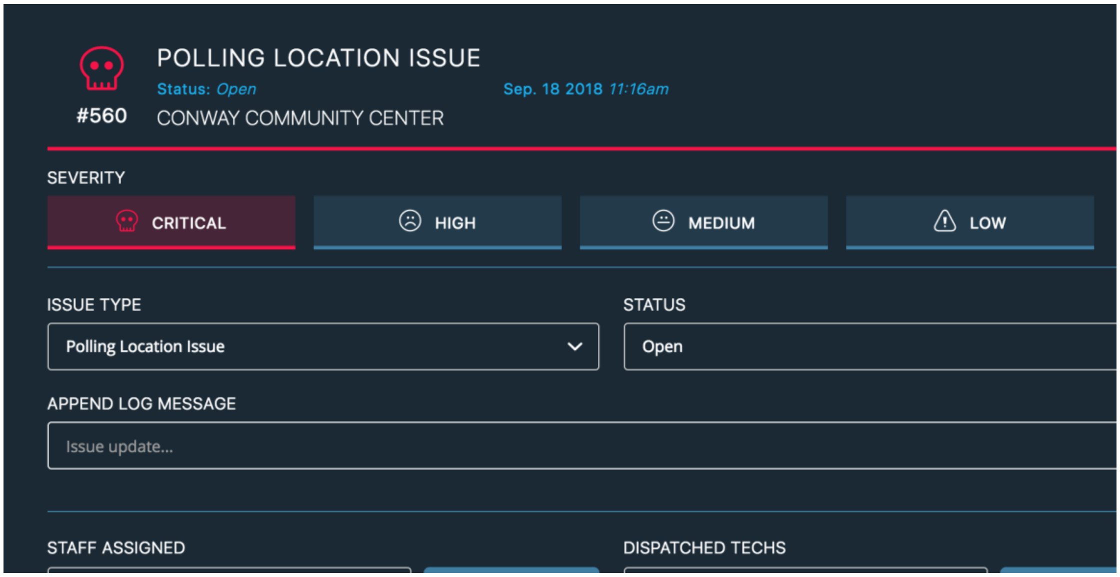
STATUS | TYPE | POLLING | ASSIGNED | DISPATCHED

ACTIONS

TOTAL RECORDS: 5

	ISSUE TYPE	LAST UPDATED	LOCATION	TECHNICIANS	SUMMARY
#560	POLLING LOCATION ISSUE Status: Open Sep. 18 2018 11:16am	3 minutes	CONWAY COMMUNITY CENTER		*Poll workers are unable to get into Civic Center*
#557	VOTING MACHINE ISSUE Status: Sep. 18 2018	9 minutes	DRYNOB MAINTENANCE SHED		*TSX touchscreen needs calibration*

Figure 3.4. iTrack Issue Tracking Screenshots. Adding or editing an incident.



POLLING LOCATION ISSUE

Status: *Open*

Sep. 18 2018 *11:16am*

#560

CONWAY COMMUNITY CENTER

SEVERITY

CRITICAL | HIGH | MEDIUM | LOW

ISSUE TYPE: Polling Location Issue

STATUS: Open

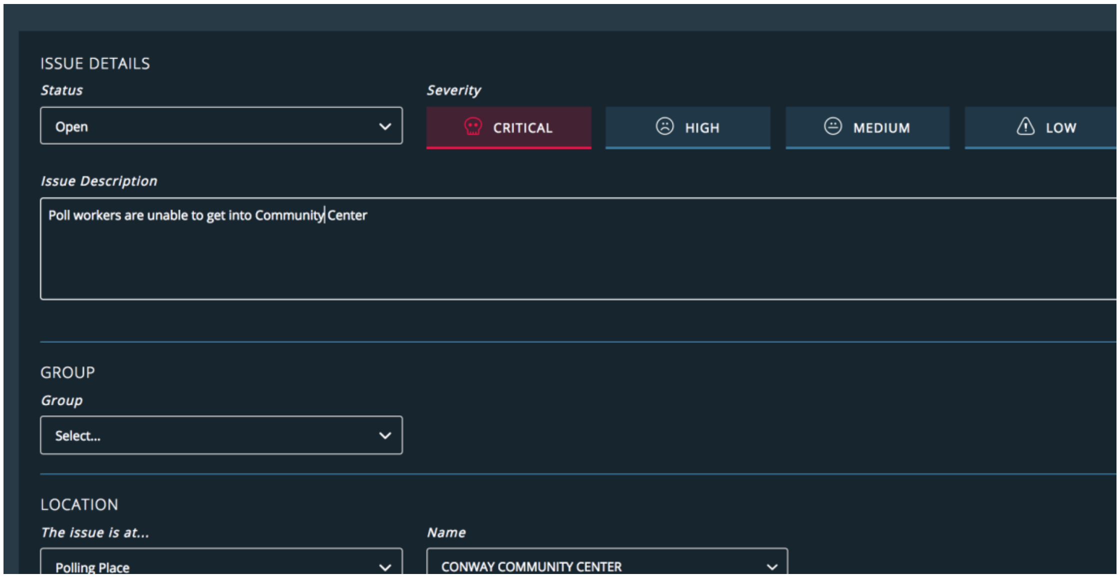
APPEND LOG MESSAGE

Issue update...

STAFF ASSIGNED

DISPATCHED TECHS

Figures 3.5. iTrack Issue Tracking Screenshots. Adding or editing an incident.



ISSUE DETAILS

Status: Open

Severity: CRITICAL | HIGH | MEDIUM | LOW

Issue Description: Poll workers are unable to get into Community Center

GROUP

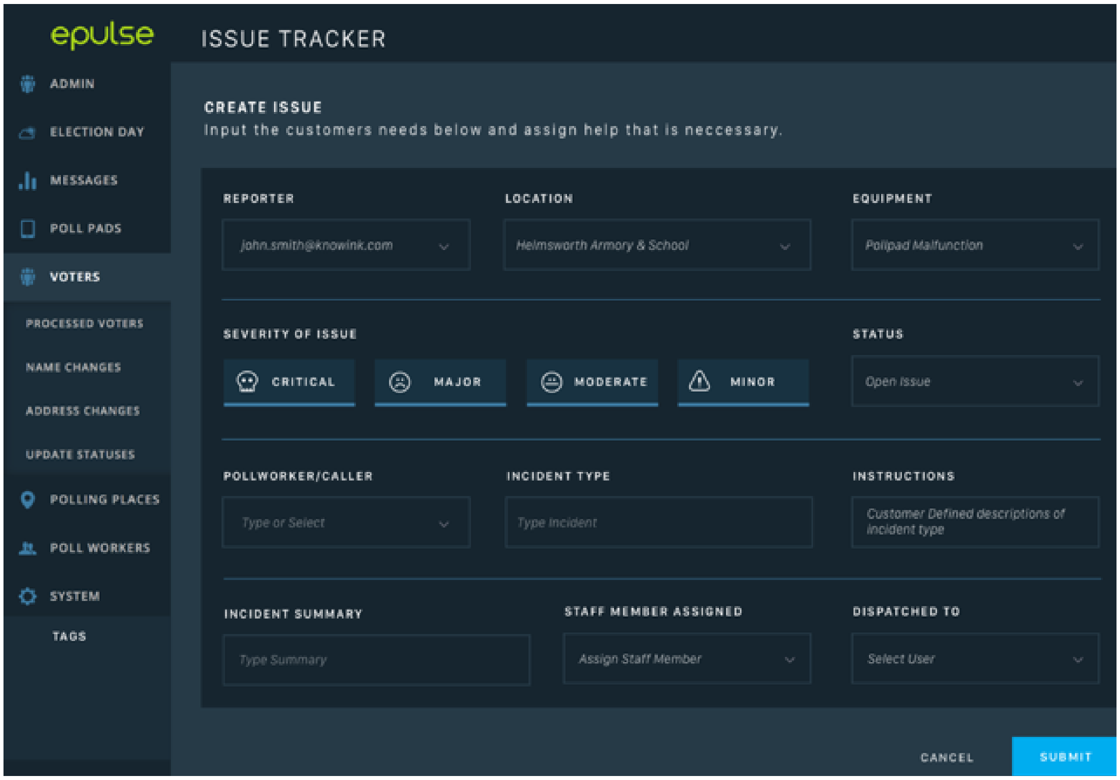
Group: Select...

LOCATION

The issue is at...: Polling Place

Name: CONWAY COMMUNITY CENTER

Figures 3.6. iTrack Issue Tracking Screenshots. Adding or editing an incident.



ISSUE TRACKER

CREATE ISSUE

Input the customers needs below and assign help that is neccessary.

REPORTER: john.smith@knowink.com

LOCATION: Helmsworth Armory & School

EQUIPMENT: Pollpad Malfunction

SEVERITY OF ISSUE: CRITICAL | MAJOR | MODERATE | MINOR

STATUS: Open Issue

POLLWORKER/CALLER: Type or Select

INCIDENT TYPE: Type Incident

INSTRUCTIONS: Customer Defined descriptions of incident type

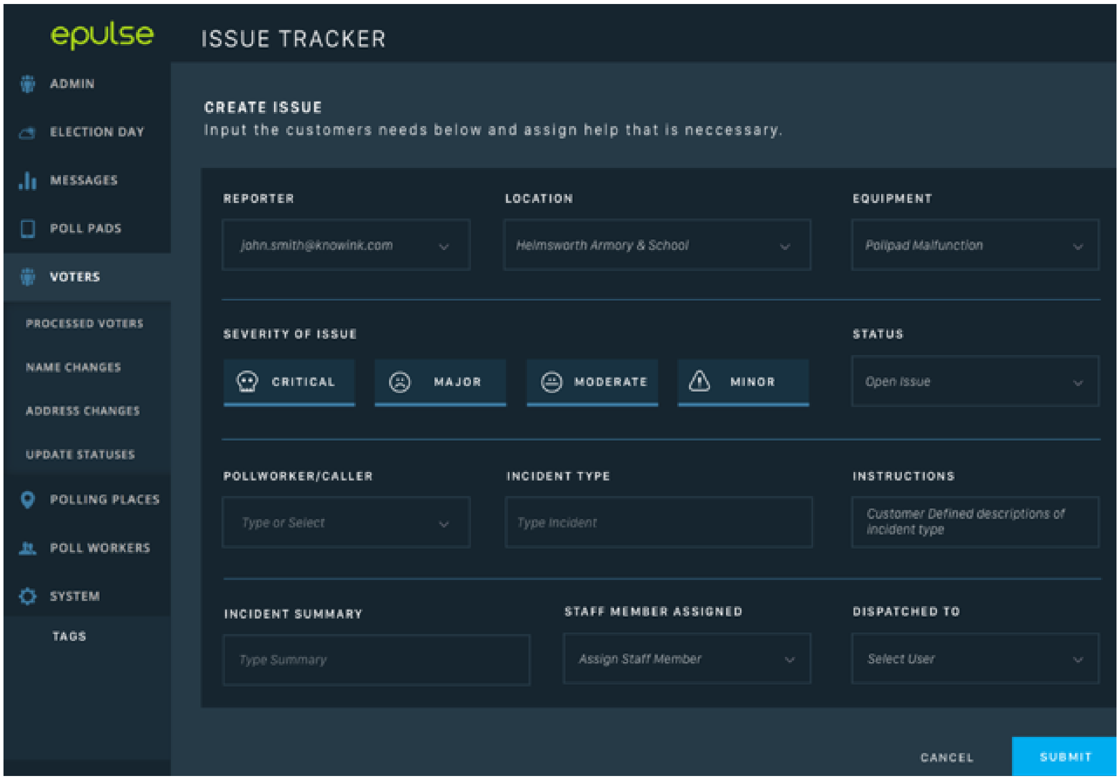
INCIDENT SUMMARY: Type Summary

STAFF MEMBER ASSIGNED: Assign Staff Member

DISPATCHED TO: Select User

CANCEL | SUBMIT

Figures 3.7. iTrack Issue Tracking Screenshots. Adding or editing an incident.



ISSUE TRACKER

CREATE ISSUE
Input the customers needs below and assign help that is neccessary.

REPORTER
john.smith@knowink.com

LOCATION
Helmsworth Armory & School

EQUIPMENT
Pollpad Malfunction

SEVERITY OF ISSUE

STATUS
Open Issue

POLLWORKER/CALLER
Type or Select

INCIDENT TYPE
Type Incident

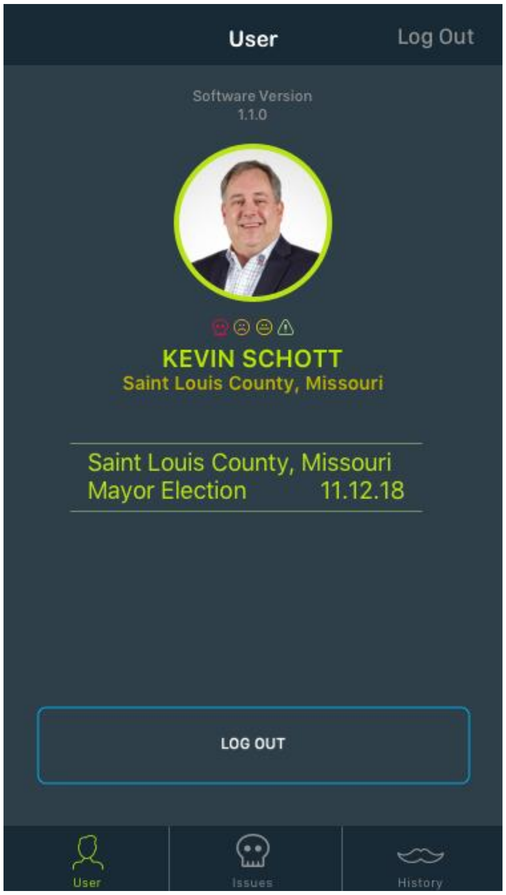
INSTRUCTIONS
Customer Defined descriptions of incident type

INCIDENT SUMMARY
Type Summary

STAFF MEMBER ASSIGNED
Assign Staff Member

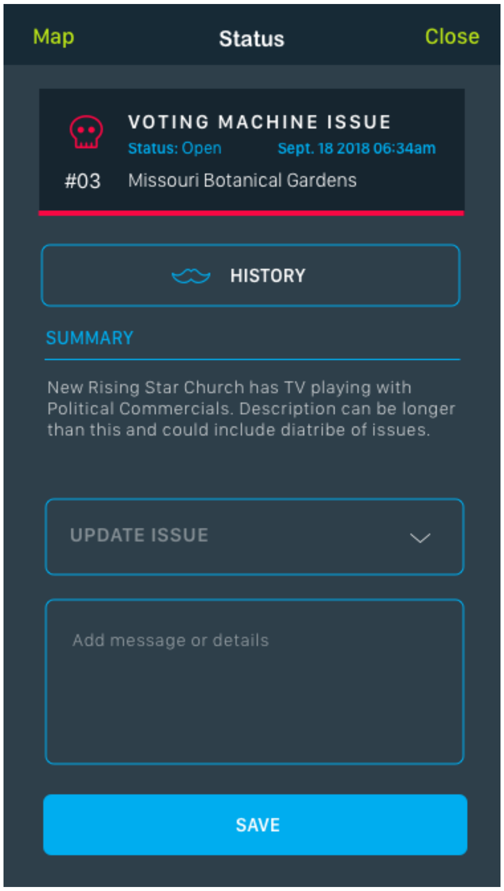
DISPATCHED TO
Select User

Figure 4.1. iTrack Mobile Application Screenshots.



KEVIN SCHOTT
Saint Louis County, Missouri

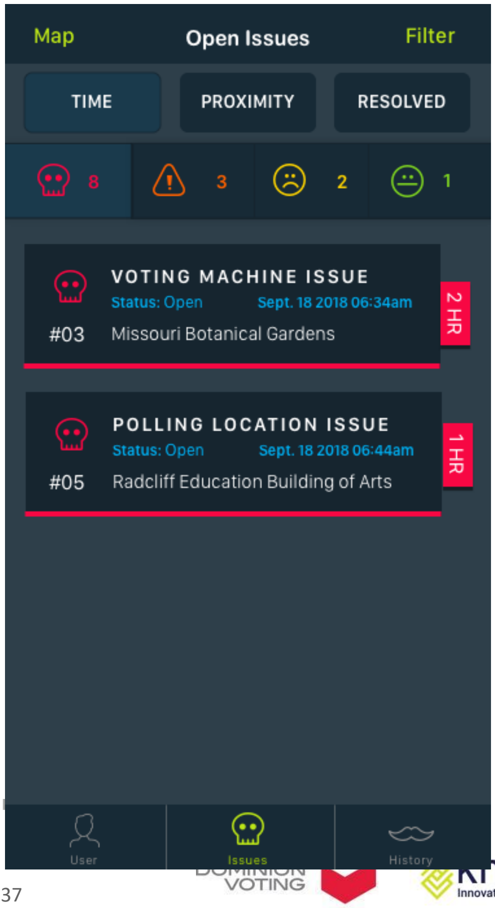
Saint Louis County, Missouri
Mayor Election 11.12.18



VOTING MACHINE ISSUE
Status: Open Sept. 18 2018 06:34am
#03 Missouri Botanical Gardens

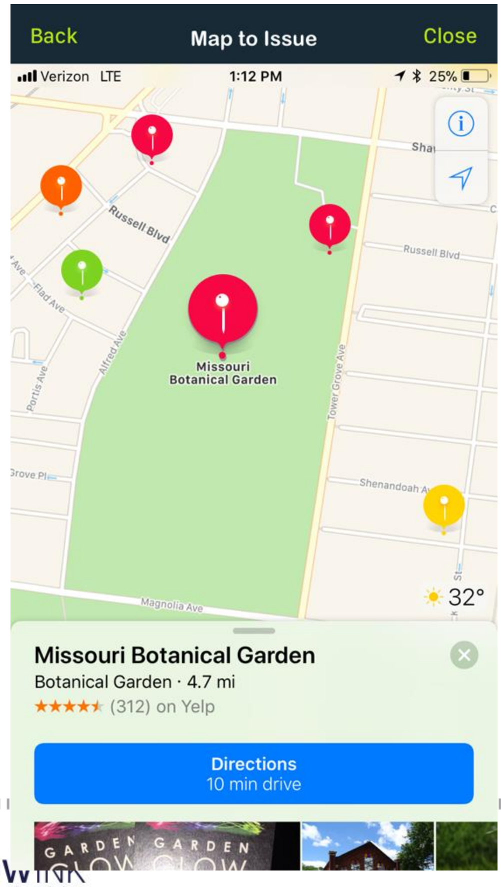
SUMMARY

New Rising Star Church has TV playing with Political Commercials. Description can be longer than this and could include diatribe of issues.

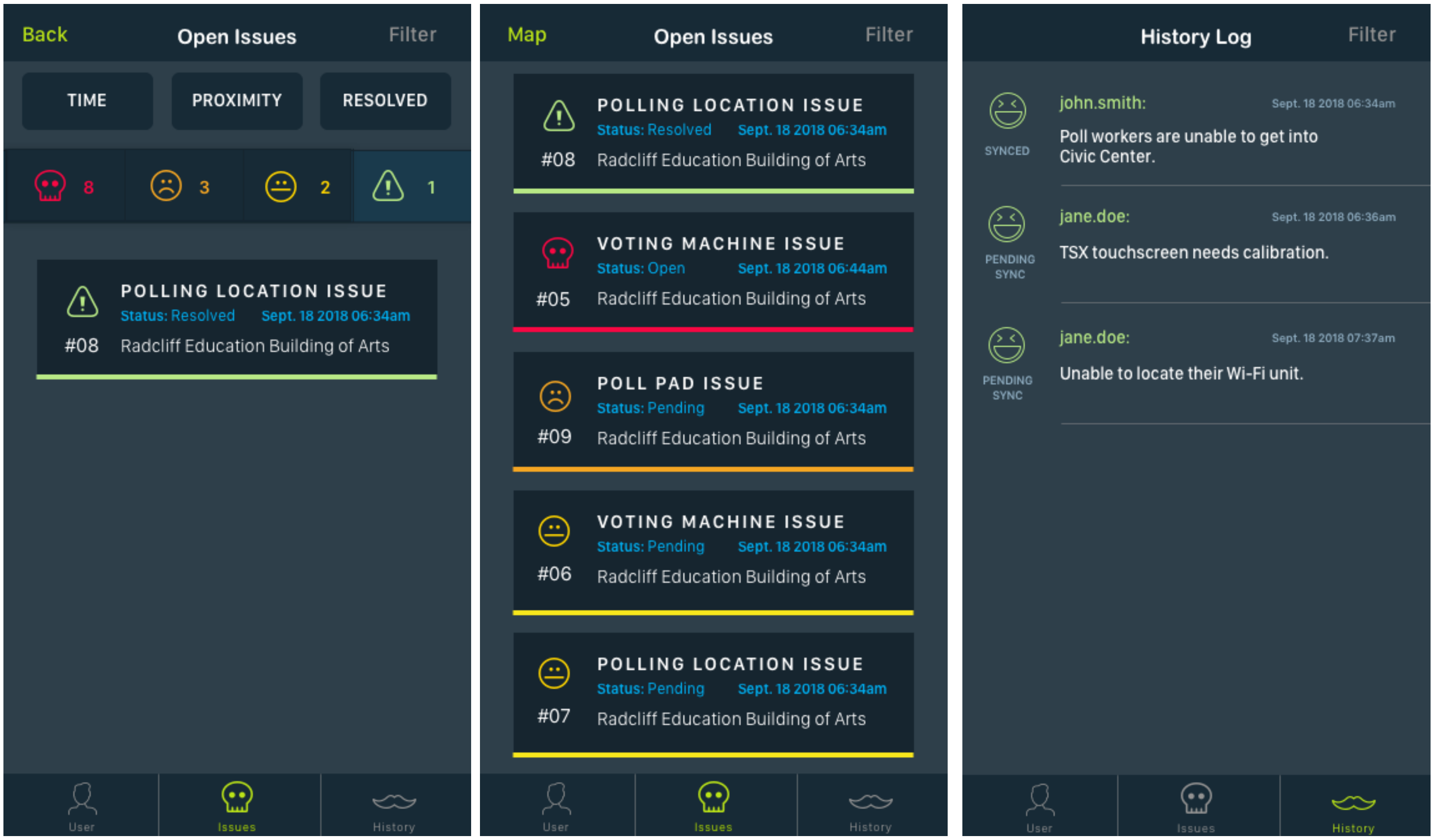


VOTING MACHINE ISSUE
Status: Open Sept. 18 2018 06:34am
#03 Missouri Botanical Gardens

POLLING LOCATION ISSUE
Status: Open Sept. 18 2018 06:44am
#05 Radcliff Education Building of Arts



Missouri Botanical Garden
Botanical Garden · 4.7 mi
★★★★★ (312) on Yelp



POLLING LOCATION ISSUE
Status: Resolved Sept. 18 2018 06:34am
#08 Radcliff Education Building of Arts

POLLING LOCATION ISSUE
Status: Resolved Sept. 18 2018 06:34am
#08 Radcliff Education Building of Arts

VOTING MACHINE ISSUE
Status: Open Sept. 18 2018 06:44am
#05 Radcliff Education Building of Arts

POLL PAD ISSUE
Status: Pending Sept. 18 2018 06:34am
#09 Radcliff Education Building of Arts

VOTING MACHINE ISSUE
Status: Pending Sept. 18 2018 06:34am
#06 Radcliff Education Building of Arts

POLLING LOCATION ISSUE
Status: Pending Sept. 18 2018 06:34am
#07 Radcliff Education Building of Arts

SYNCED
john.smith: Sept. 18 2018 06:34am
Poll workers are unable to get into Civic Center.

PENDING SYNC
jane.doe: Sept. 18 2018 06:36am
TSX touchscreen needs calibration.

PENDING SYNC
jane.doe: Sept. 18 2018 07:37am
Unable to locate their Wi-Fi unit.

Figures 4.2. iTrack Issue Tracking Screenshots. List view of incidents. Each incident includes a color code and symbol.

ePulse Module & Mobile Application: iTrack Assets

TRACK ALL ELECTION EQUIPMENT WITH ITRACK ASSETS ON MOBILE DEVICES

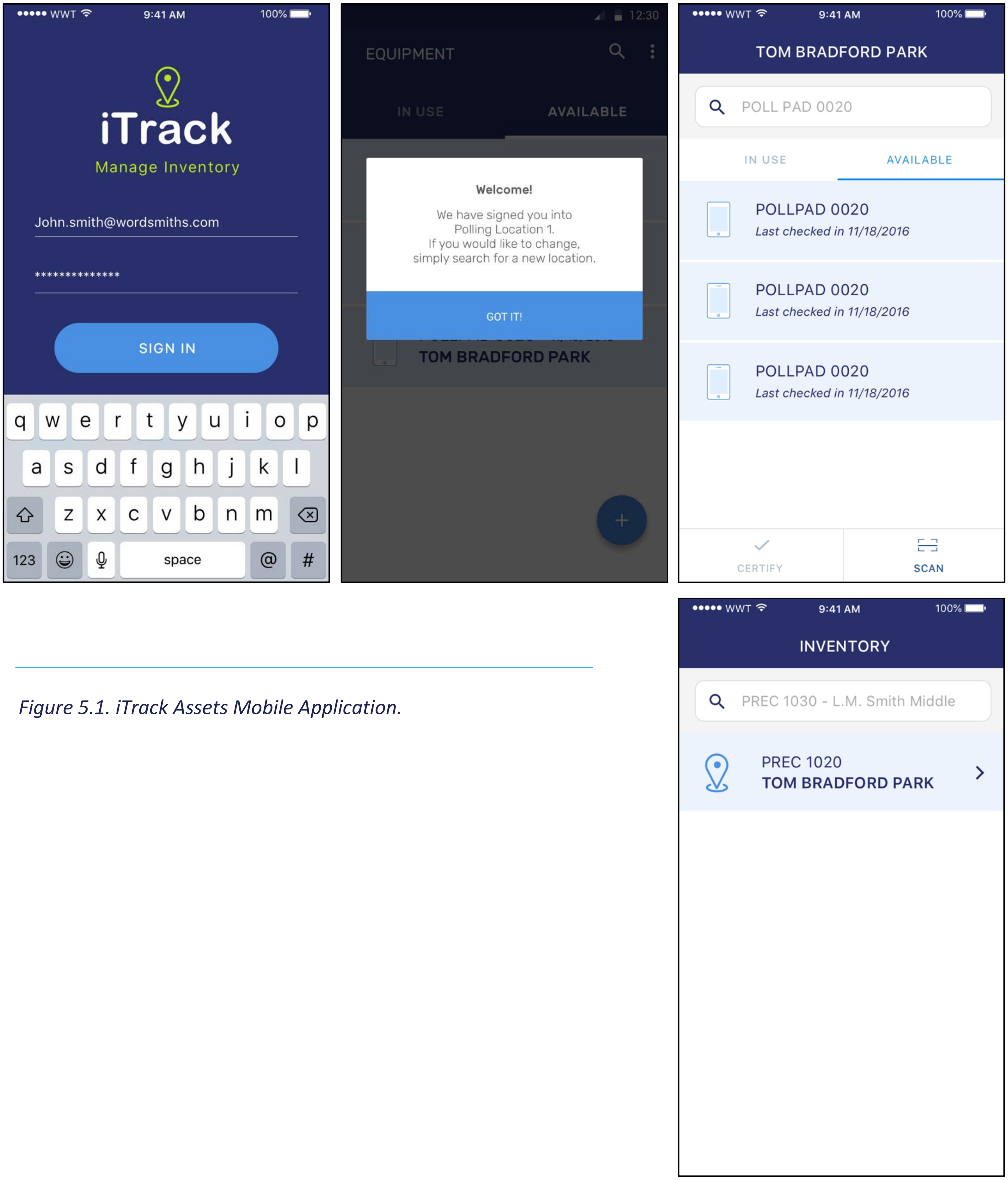
This tool allows the user to create a comprehensive inventory database of their election-related equipment for assigning and tracking. Users can set up item names, serial numbers, and other pertinent data. Users can assign inventory items to individual polling location destinations.

iTrack Assets is also a mobile application that can be used on any iOS or Android device. Using iTrack, tech support can communicate with poll workers via text messaging and video chat to get a first-hand look at what the poll worker is encountering. It uses data from the client's ePulse database. Users can select a polling place from the ePulse database and scan the barcode to check devices into or out of the polling place inventory. This information is communicated in real time, which allows viewers the ability to check on the status of inventory items at each polling place through ePulse. Election officials can set alerts for missing or low inventory, and log device incidents in the iTrack application and ePulse module for expedited issue tracking and resolution.

With iTrack Assets users can

- Scan any barcode
- Track inventory
- Set alerts
- Print labels
- Log incidents

Screenshots of the iTrack Assets and iTrack Assets Mobile application on the following page.



John.smith@wordsmiths.com

****

Welcome!

We have signed you into Polling Location 1.
If you would like to change, simply search for a new location.

Last checked in 11/18/2016

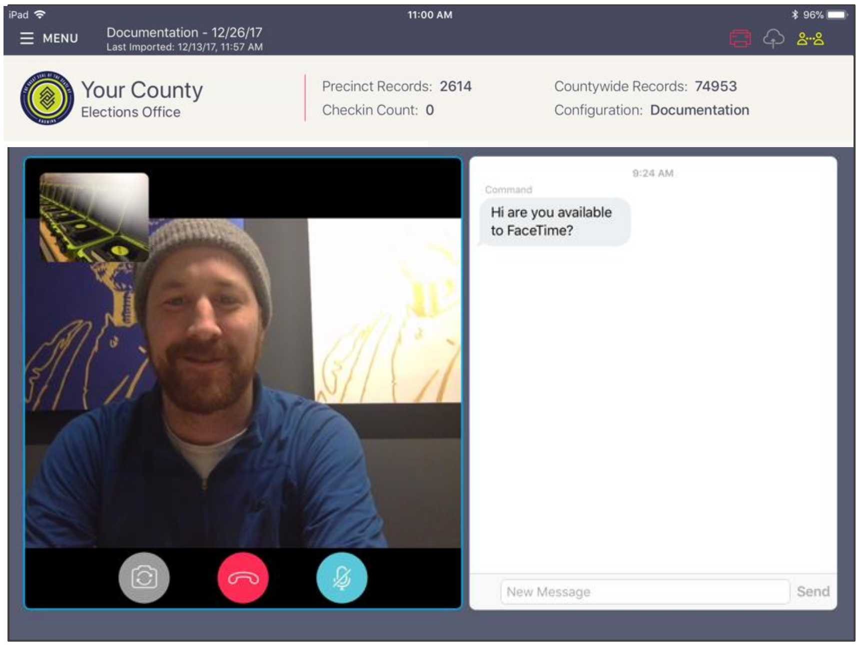
Last checked in 11/18/2016

Last checked in 11/18/2016

Figure 5.1. iTrack Assets Mobile Application.

ePulse Module: Video and Text Messaging

ePulse provides election authorities with a powerful and complete communications tool between polling places and the elections office. Customizable and pre-written messages can be sent between the Poll Pads and ePulse to communicate questions and answers. KNOWiNK's innovative video chat is embedded directly into the Poll Pad application and is an election industry first. It revolutionizes how poll workers communicate issues to the election authority by giving them a first-hand look at the polling place.



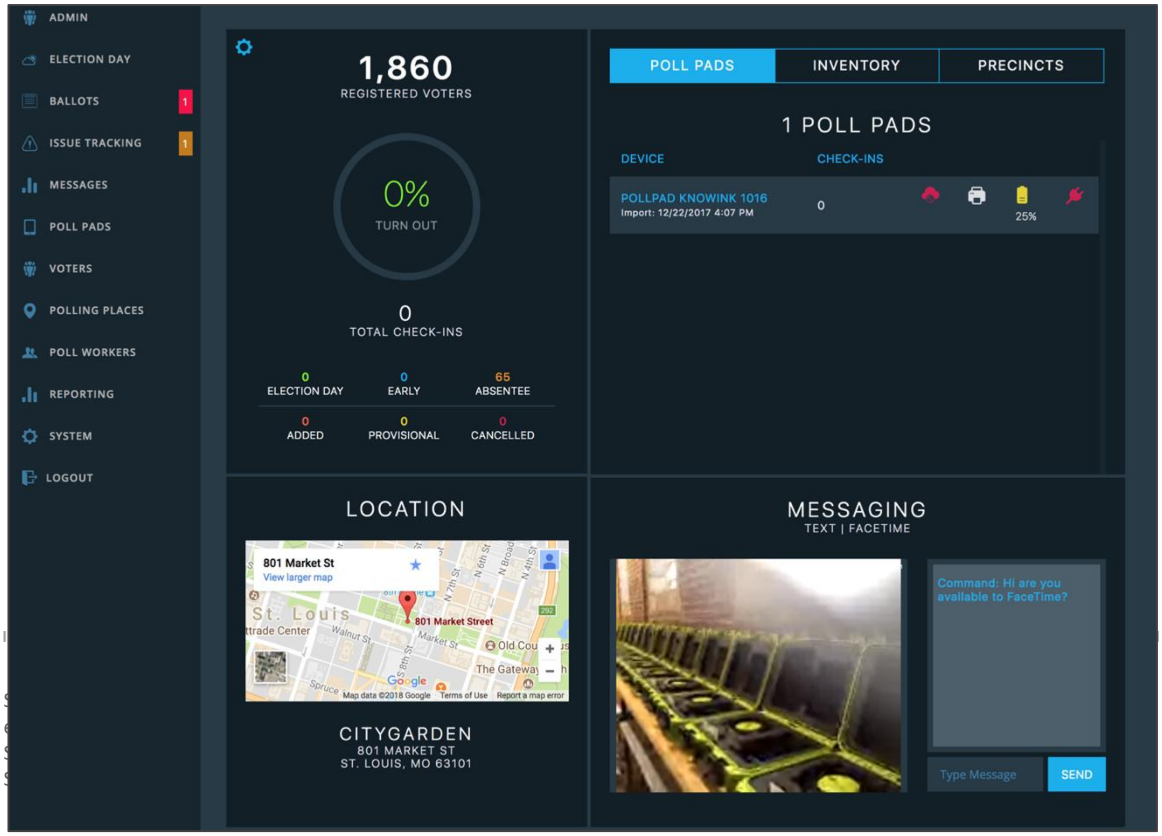
Documentation - 12/26/17
Last Imported: 12/13/17, 11:57 AM

Your County
Elections Office

Precinct Records: 2614
Checkin Count: 0
Countywide Records: 74953
Configuration: Documentation

9:24 AM
Command
Hi are you available to FaceTime?

Figures 6.1 and 6.2. Resolve issues in a polling place with ePulse's Video and Text Messaging capabilities.



1,860
REGISTERED VOTERS

0%
TURN OUT

0
TOTAL CHECK-INS

ELECTION DAY	EARLY	ABSENTEE
0	0	65

ADDED	PROVISIONAL	CANCELLED
0	0	0

1 POLL PADS

DEVICE	CHECK-INS
POLLPAD KNOWINK 1016 Import: 12/22/2017 4:07 PM	0

25%

LOCATION

CITYGARDEN
801 MARKET ST
ST. LOUIS, MO 63101

MESSAGING
TEXT | FACETIME

Command: Hi are you available to FaceTime?

ePulse Module: Ballot Tracking

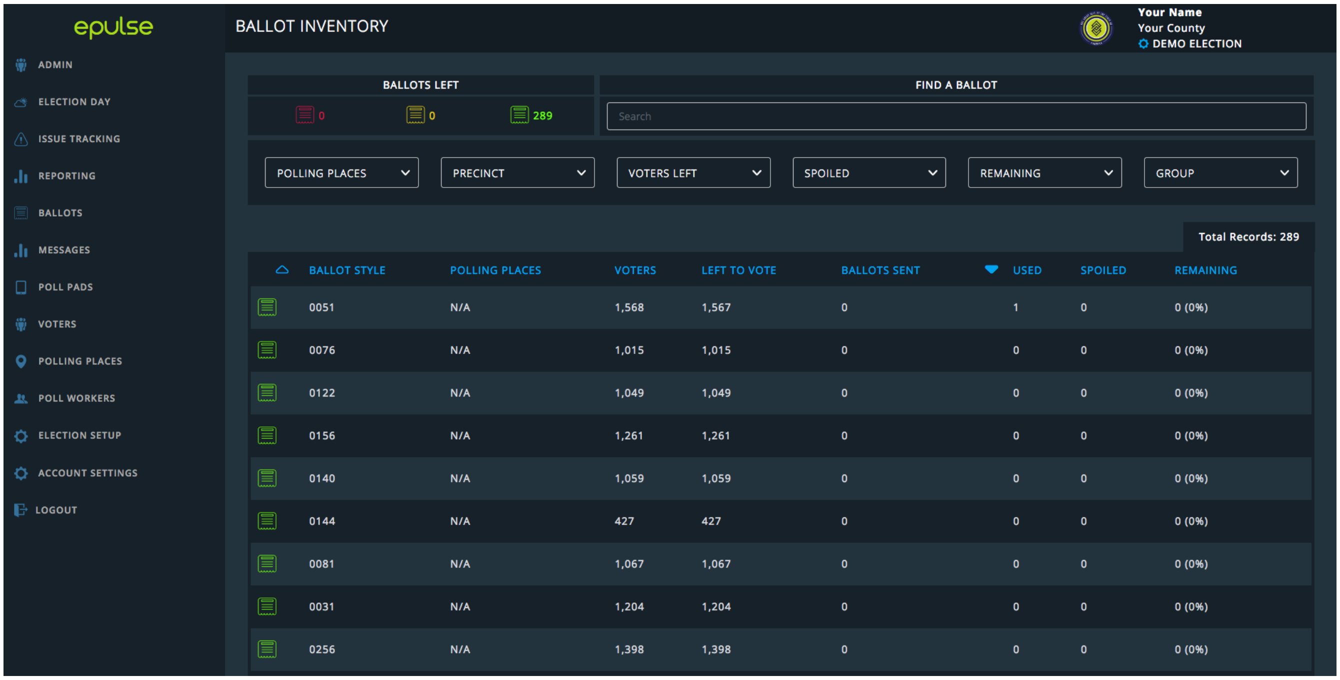
Ballot inventory levels imported into ePulse prior to an election are tracked in real time on the Poll Pad. Poll Pad gives a summary report to reconcile how many ballots were cast and how many were spoiled throughout the day.

ePulse provides customizable reports that summarize the ballot accounting at each location. Ballot inventory levels are tracked by location and the election official may see the numbers update in real time. Filters can be applied to search inventory levels and the user can filter which locations have less than 100 ballots remaining.

Restrictions on the number of ballots issued to a voter can be set to comply with specific election requirements. Poll Pad allows poll workers to account for all ballot activity with running counts throughout the election and poll workers can print summary reports for end-of-day reconciliation. The summary report is customizable and includes information on how many ballots were cast (by party, if necessary), how many were spoiled throughout the day, check-in totals, and any other data type that may need to be tallied.

Reports set up in ePulse show the number of ballots available by individual locations. Alerts may be set up in ePulse to alert when ballot inventory levels have gone below a user-definable percentage. These tie in with the Optimal, Acceptable, and Critical alerts elsewhere in ePulse.

Figure 7. Easy-to-use ballot tracking dashboard in ePulse.

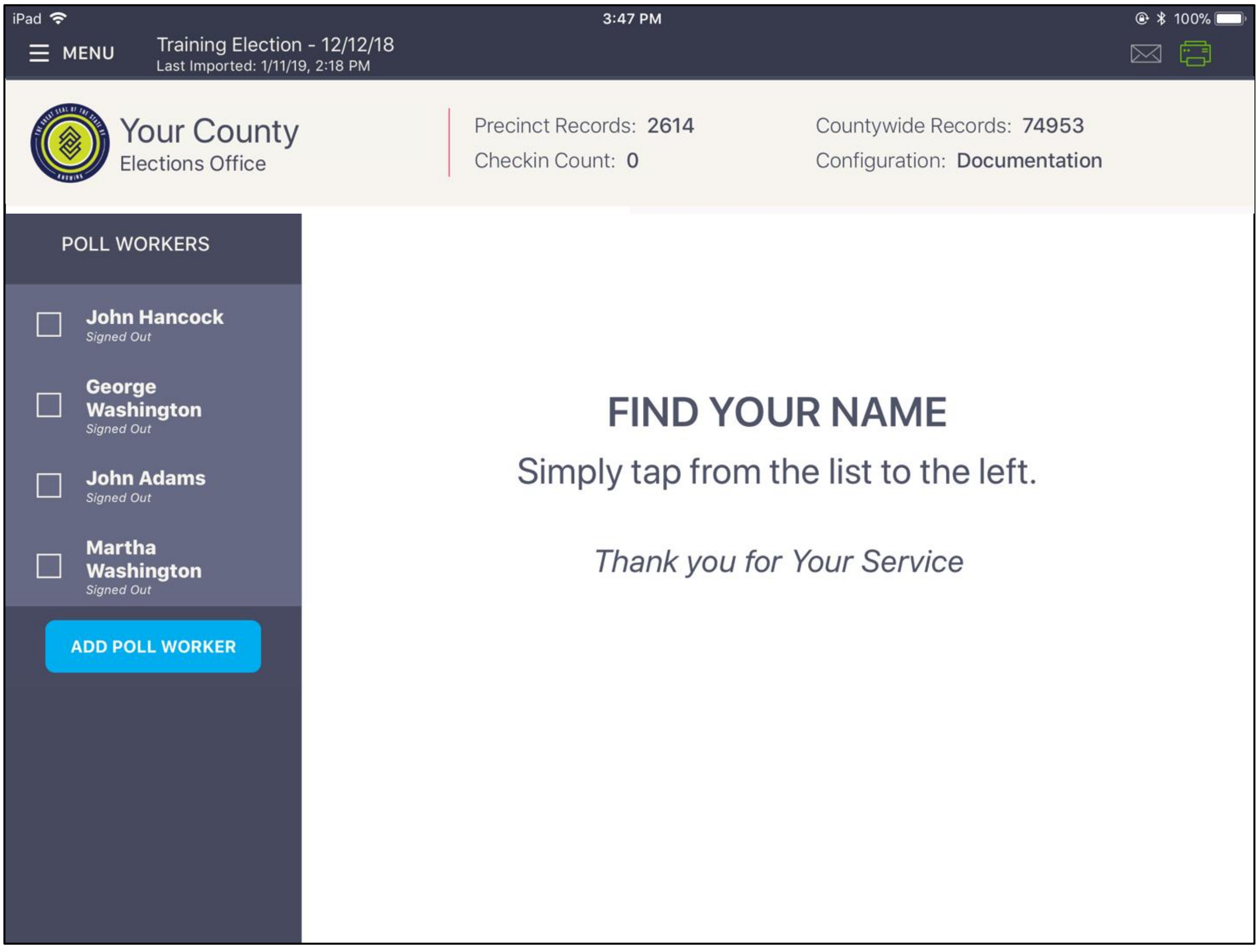


Total Records: 289

BALLOT STYLE	POLLING PLACES	VOTERS	LEFT TO VOTE	BALLOTS SENT	USED	SPOILED	REMAINING
0051	N/A	1,568	1,567	0	1	0	0 (0%)
0076	N/A	1,015	1,015	0	0	0	0 (0%)
0122	N/A	1,049	1,049	0	0	0	0 (0%)
0156	N/A	1,261	1,261	0	0	0	0 (0%)
0140	N/A	1,059	1,059	0	0	0	0 (0%)
0144	N/A	427	427	0	0	0	0 (0%)
0081	N/A	1,067	1,067	0	0	0	0 (0%)
0031	N/A	1,204	1,204	0	0	0	0 (0%)
0256	N/A	1,398	1,398	0	0	0	0 (0%)

ePulse Module: Poll Worker Time Tracking

Poll Pad checks in poll workers, logging the timestamp and signature for each event. ePulse allows election officials to assign roles and pay rates to poll workers and provides reports on payroll, attendance and election day performance. Poll worker attendance is automatically managed on the Poll Pad. Using ePulse, election authorities may export a report of poll worker attendance and time for easy reporting and payment.



Training Election - 12/12/18
Last Imported: 1/11/19, 2:18 PM

Your County
Elections Office

Precinct Records: 2614
Checkin Count: 0
Countywide Records: 74953
Configuration: Documentation

- ☐ **John Hancock** *Signed Out*
- ☐ **George Washington** *Signed Out*
- ☐ **John Adams** *Signed Out*
- ☐ **Martha Washington** *Signed Out*

FIND YOUR NAME

Simply tap from the list to the left.

Thank you for Your Service

Figure 8. The Poll Worker Time Tracking Tool on the Poll Pad.

ePulse Module: Reporting

Reports can be run in ePulse at any point during and after the election. Our standard reports are listed below. The City can apply filters to customize the standard reports and they may be exported and printed.

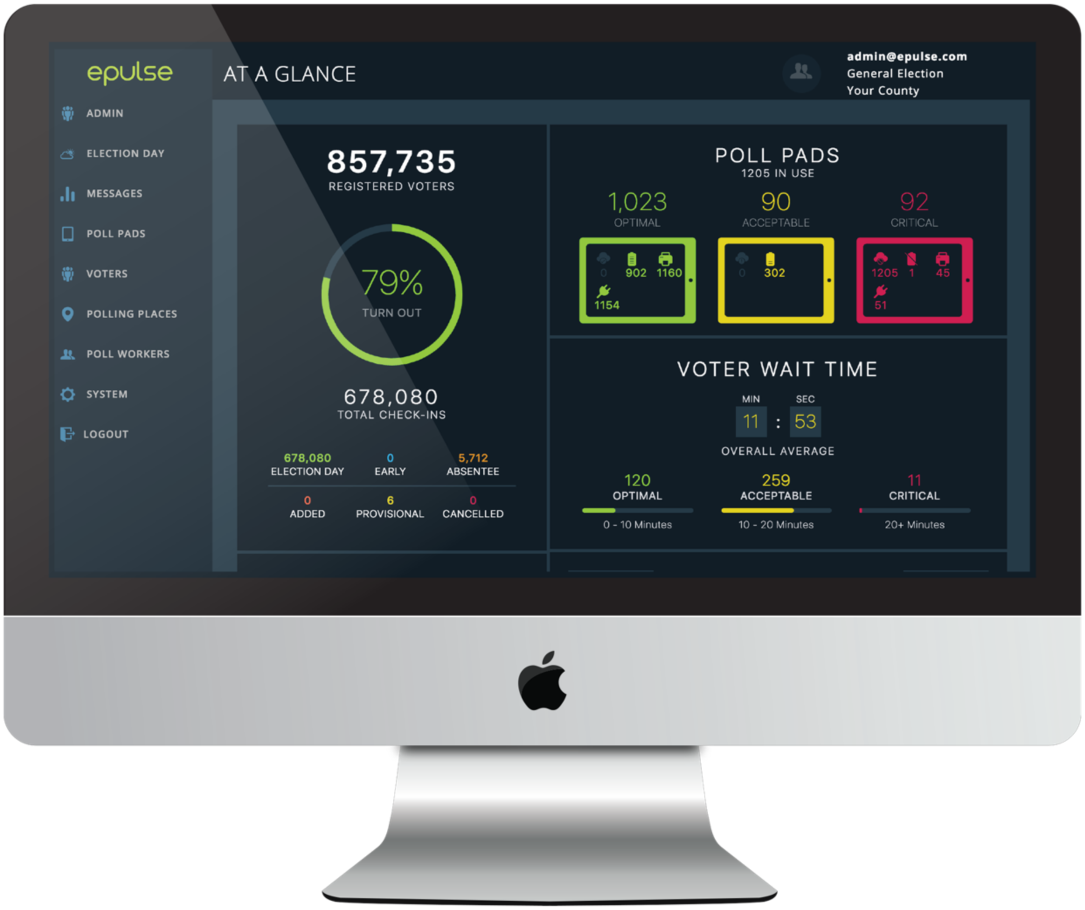
- Voter Check-in Details with Signatures
- Suspense/Inactive Voters who Voted
- Voter Turnout by Precinct
- Poll Worker Sign Ins
- Voter Turnout
- Provisional Voter Report
- Canceled Voter Check Ins
- Voter Rolls by Polling Place
- Ballot Styles
- Voter Turnout by Polling Place

ePulse can sort, filter, and search through check-in data in the post-election discovery process, making it easy to hone in on the exact information that is needed at any time.

The Poll Pad system can report on any data collected by the auditing system, including but not limited to: transaction types; transaction times; transactions by poll official; and number of searches per transaction. Transaction types and transaction times are easily viewable on the Election Day dashboard and updated in real time throughout the day with the use of an internet connection.

Sample ePulse reports are provided on the following pages and include both the web browser screenshots and exported reports.

Figures 9.1 and 9.2. ePulse dashboard and report export options. The ePulse home page dashboard provides real-time metrics on voter turnout, Poll Pad Status, and more. Included in Figure 100 is our simple to use voter history export functions.



admin@epulse.com
General Election
Your County

857,735
REGISTERED VOTERS

79%
TURN OUT

678,080
TOTAL CHECK-INS

678,080 ELECTION DAY
0 EARLY
5,712 ABSENTEE
0 ADDED
6 PROVISIONAL
0 CANCELLED

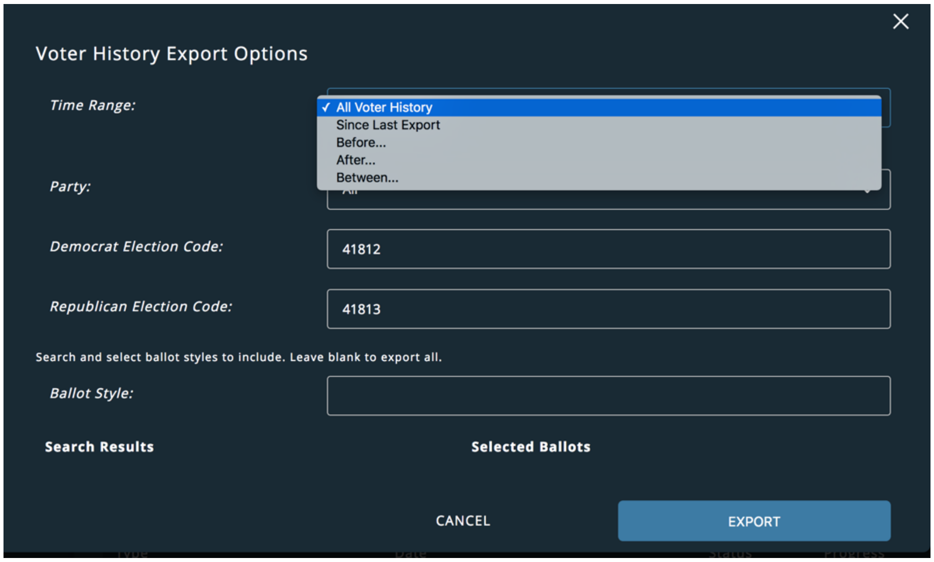
POLL PADS
1205 IN USE

1,023 OPTIMAL
90 ACCEPTABLE
92 CRITICAL

0 902 1160 1154
0 302
1205 1 45 51

VOTER WAIT TIME
MIN 11 : SEC 53
OVERALL AVERAGE

120 OPTIMAL 0 - 10 Minutes
259 ACCEPTABLE 10 - 20 Minutes
11 CRITICAL 20+ Minutes



Voter History Export Options

Time Range: All Voter History

Party: All

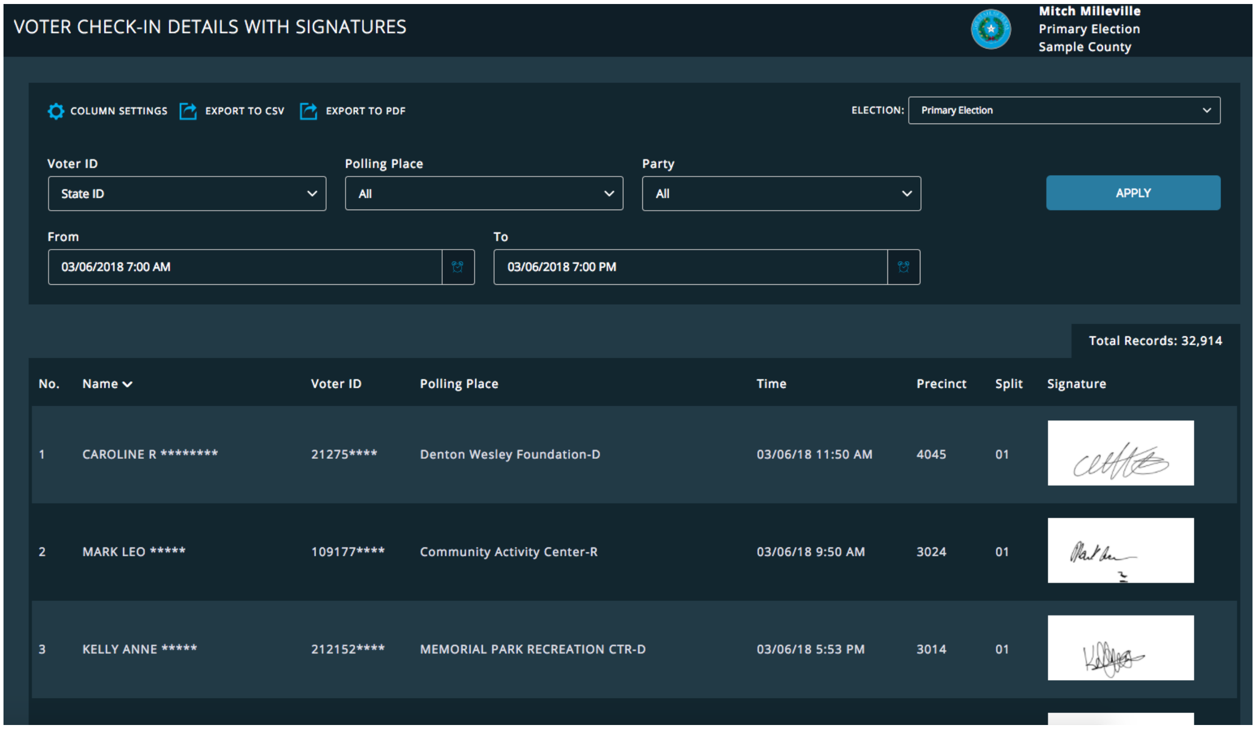
Democrat Election Code: 41812

Republican Election Code: 41813

Search and select ballot styles to include. Leave blank to export all.

Ballot Style:

Figures 9.3 and 9.4. ePulse reports: Voter check-in details with signatures and provisional voter report.



VOTER CHECK-IN DETAILS WITH SIGNATURES

Mitch Milleville
Primary Election
Sample County

ELECTION: Primary Election

Voter ID: State ID

Polling Place: All

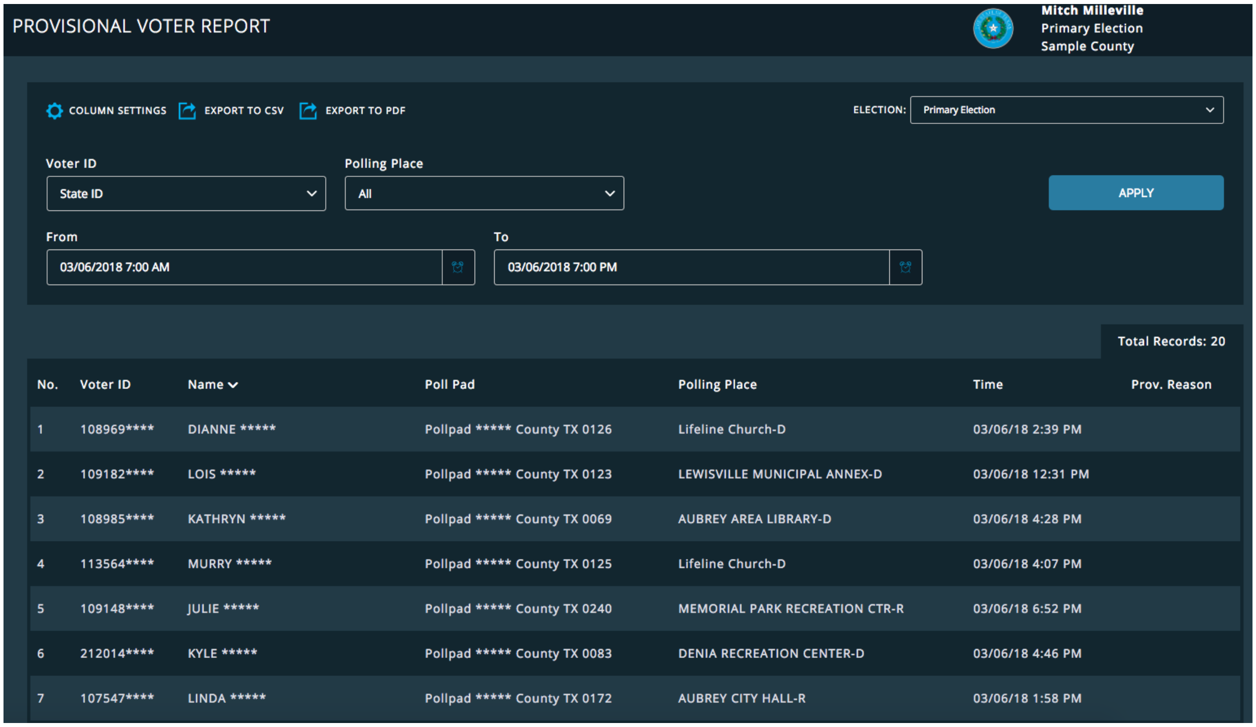
Party: All

From: 03/06/2018 7:00 AM

To: 03/06/2018 7:00 PM

Total Records: 32,914

No.	Name	Voter ID	Polling Place	Time	Precinct	Split	Signature
1	CAROLINE R ********	21275****	Denton Wesley Foundation-D	03/06/18 11:50 AM	4045	01	
2	MARK LEO *****	109177****	Community Activity Center-R	03/06/18 9:50 AM	3024	01	
3	KELLY ANNE *****	212152****	MEMORIAL PARK RECREATION CTR-D	03/06/18 5:53 PM	3014	01	



PROVISIONAL VOTER REPORT

Mitch Milleville
Primary Election
Sample County

ELECTION: Primary Election

Voter ID: State ID

Polling Place: All

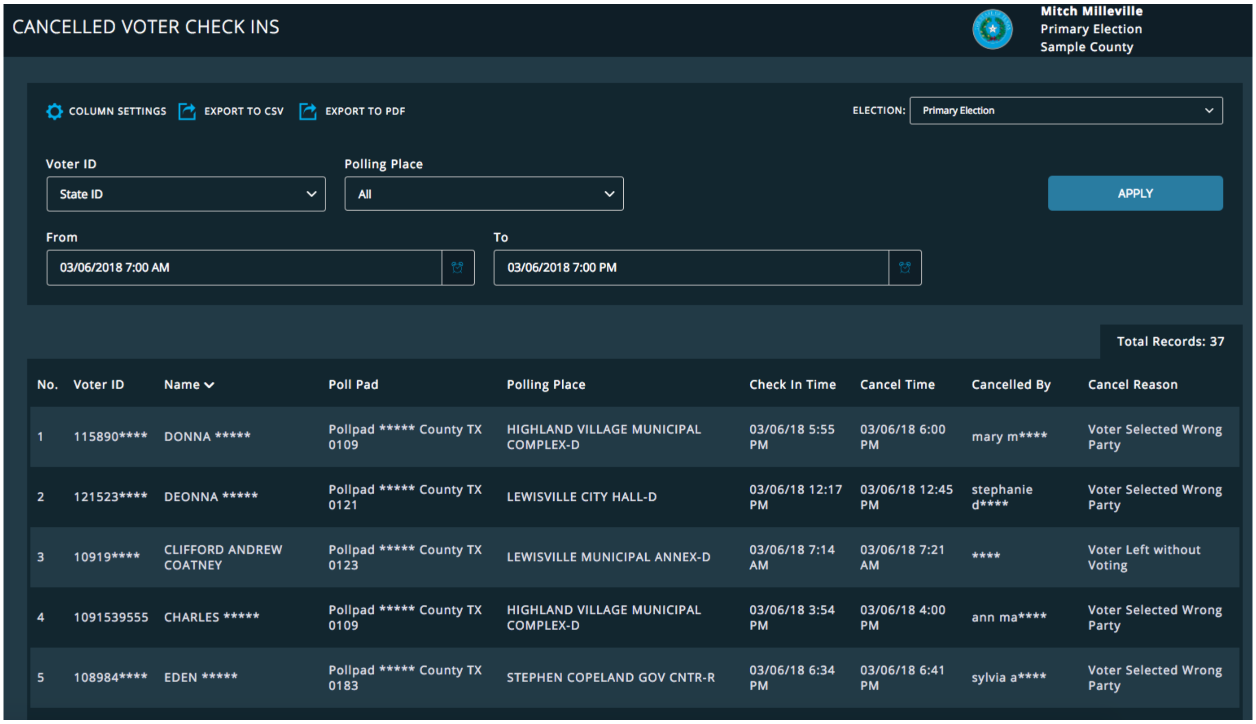
From: 03/06/2018 7:00 AM

To: 03/06/2018 7:00 PM

Total Records: 20

No.	Voter ID	Name	Poll Pad	Polling Place	Time	Prov. Reason
1	108969****	DIANNE *****	Pollpad ***** County TX 0126	Lifeline Church-D	03/06/18 2:39 PM	
2	109182****	LOIS *****	Pollpad ***** County TX 0123	LEWISVILLE MUNICIPAL ANNEX-D	03/06/18 12:31 PM	
3	108985****	KATHRYN *****	Pollpad ***** County TX 0069	AUBREY AREA LIBRARY-D	03/06/18 4:28 PM	
4	113564****	MURRY *****	Pollpad ***** County TX 0125	Lifeline Church-D	03/06/18 4:07 PM	
5	109148****	JULIE *****	Pollpad ***** County TX 0240	MEMORIAL PARK RECREATION CTR-R	03/06/18 6:52 PM	
6	212014****	KYLE *****	Pollpad ***** County TX 0083	DENIA RECREATION CENTER-D	03/06/18 4:46 PM	
7	107547****	LINDA *****	Pollpad ***** County TX 0172	AUBREY CITY HALL-R	03/06/18 1:58 PM	

Figures 9.5 and 9.6. ePulse reports: Cancelled voter check-ins and voter turnout.



CANCELLED VOTER CHECK INS

Mitch Milleville
Primary Election
Sample County

ELECTION: Primary Election

Voter ID: State ID

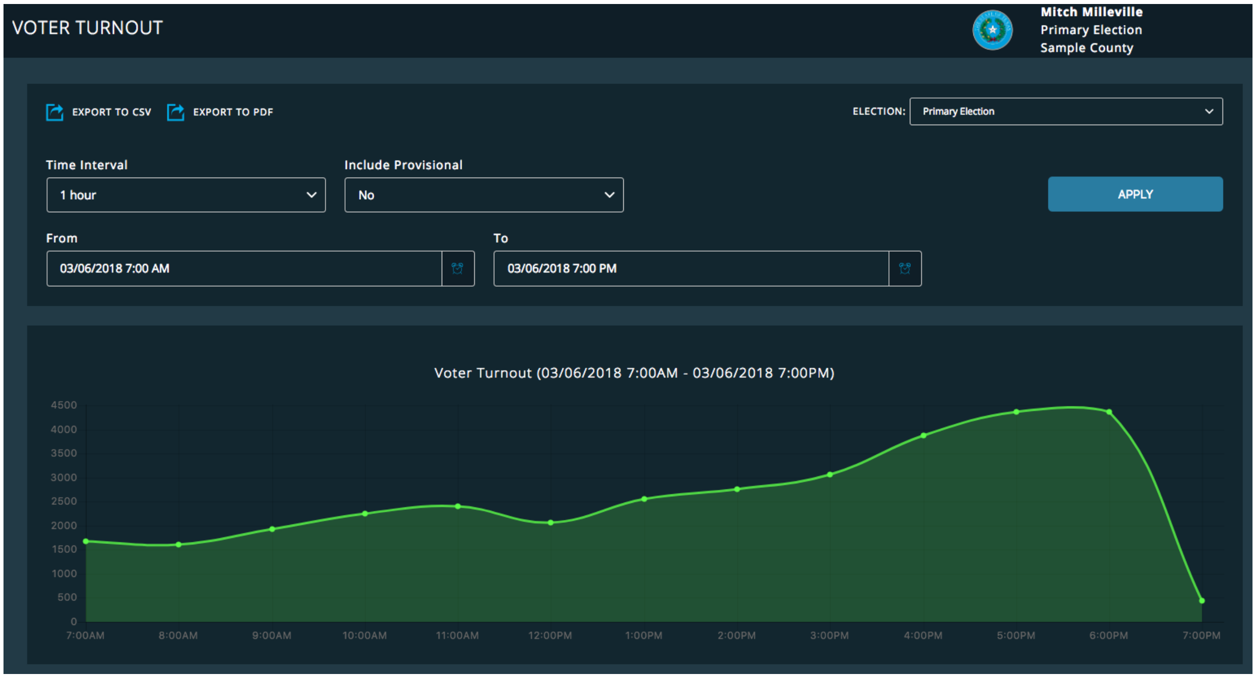
Polling Place: All

From: 03/06/2018 7:00 AM

To: 03/06/2018 7:00 PM

Total Records: 37

No.	Voter ID	Name	Poll Pad	Polling Place	Check In Time	Cancel Time	Cancelled By	Cancel Reason
1	115890****	DONNA *****	Pollpad ***** County TX 0109	HIGHLAND VILLAGE MUNICIPAL COMPLEX-D	03/06/18 5:55 PM	03/06/18 6:00 PM	mary m****	Voter Selected Wrong Party
2	121523****	DEONNA *****	Pollpad ***** County TX 0121	LEWISVILLE CITY HALL-D	03/06/18 12:17 PM	03/06/18 12:45 PM	stephanie d****	Voter Selected Wrong Party
3	10919****	CLIFFORD ANDREW COATNEY	Pollpad ***** County TX 0123	LEWISVILLE MUNICIPAL ANNEX-D	03/06/18 7:14 AM	03/06/18 7:21 AM	****	Voter Left without Voting
4	1091539555	CHARLES *****	Pollpad ***** County TX 0109	HIGHLAND VILLAGE MUNICIPAL COMPLEX-D	03/06/18 3:54 PM	03/06/18 4:00 PM	ann ma****	Voter Selected Wrong Party
5	108984****	EDEN *****	Pollpad ***** County TX 0183	STEPHEN COPELAND GOV CNTR-R	03/06/18 6:34 PM	03/06/18 6:41 PM	sylvia a****	Voter Selected Wrong Party



VOTER TURNOUT

Mitch Milleville
Primary Election
Sample County

ELECTION: Primary Election

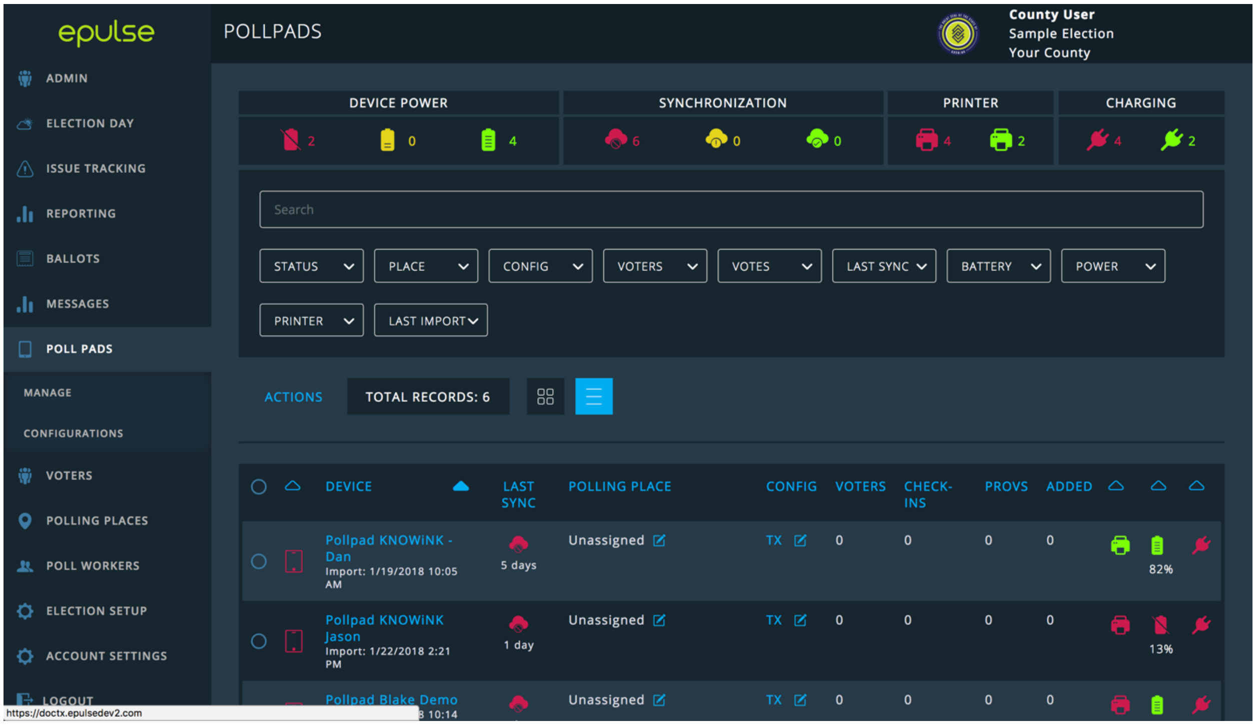
Time Interval: 1 hour

Include Provisional: No

From: 03/06/2018 7:00 AM

To: 03/06/2018 7:00 PM

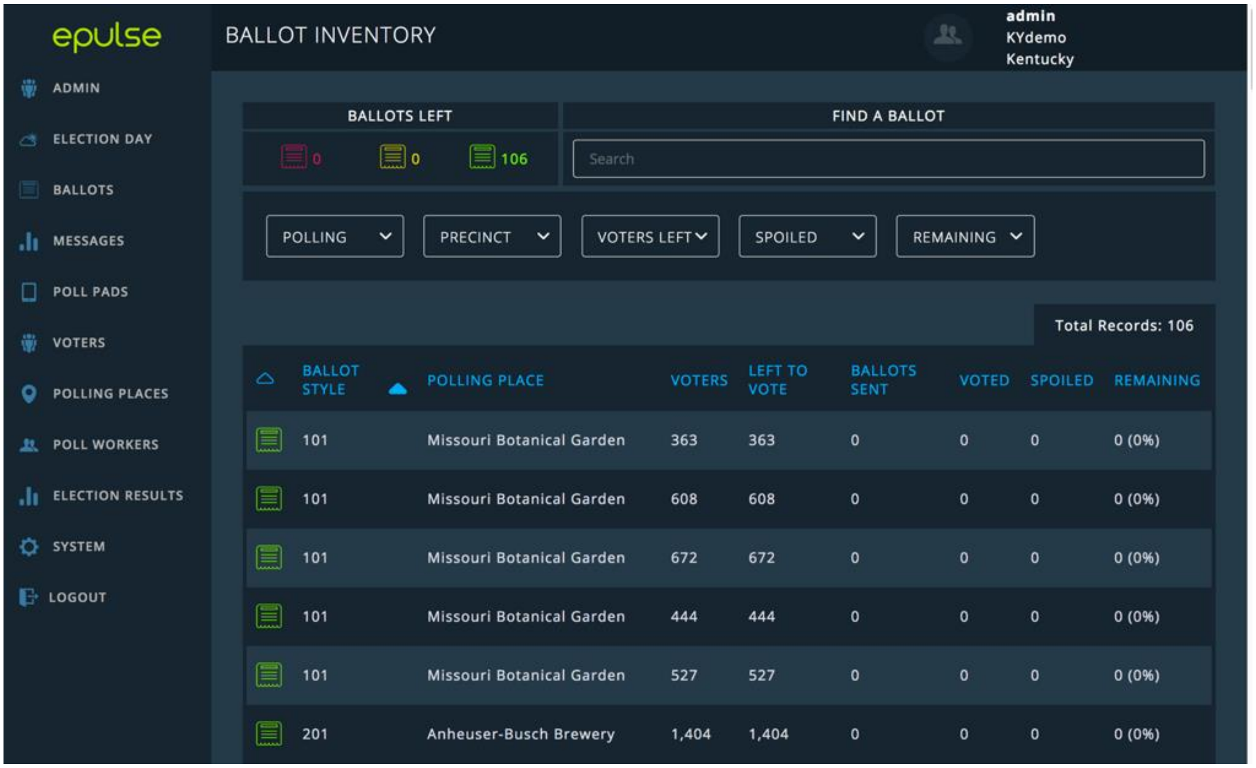
Figures 9.7 and 9.8. ePulse dashboards: Dashboard views allow the City to monitor the device power status of all Poll Pads. The City can use ePulse to track its ballot inventory by Polling Place.



County User
Sample Election
Your County

DEVICE POWER			SYNCHRONIZATION			PRINTER		CHARGING	
2	0	4	6	0	0	4	2	4	2

DEVICE	LAST SYNC	POLLING PLACE	CONFIG	VOTERS	CHECK-INS	PROVS	ADDED			
Pollpad KNOWiNK - Dan Import: 1/19/2018 10:05 AM	5 days	Unassigned	TX	0	0	0	0		82%	
Pollpad KNOWiNK Jason Import: 1/22/2018 2:21 PM	1 day	Unassigned	TX	0	0	0	0		13%	
Pollpad Blake Demo 8 10:14		Unassigned	TX	0	0	0	0			



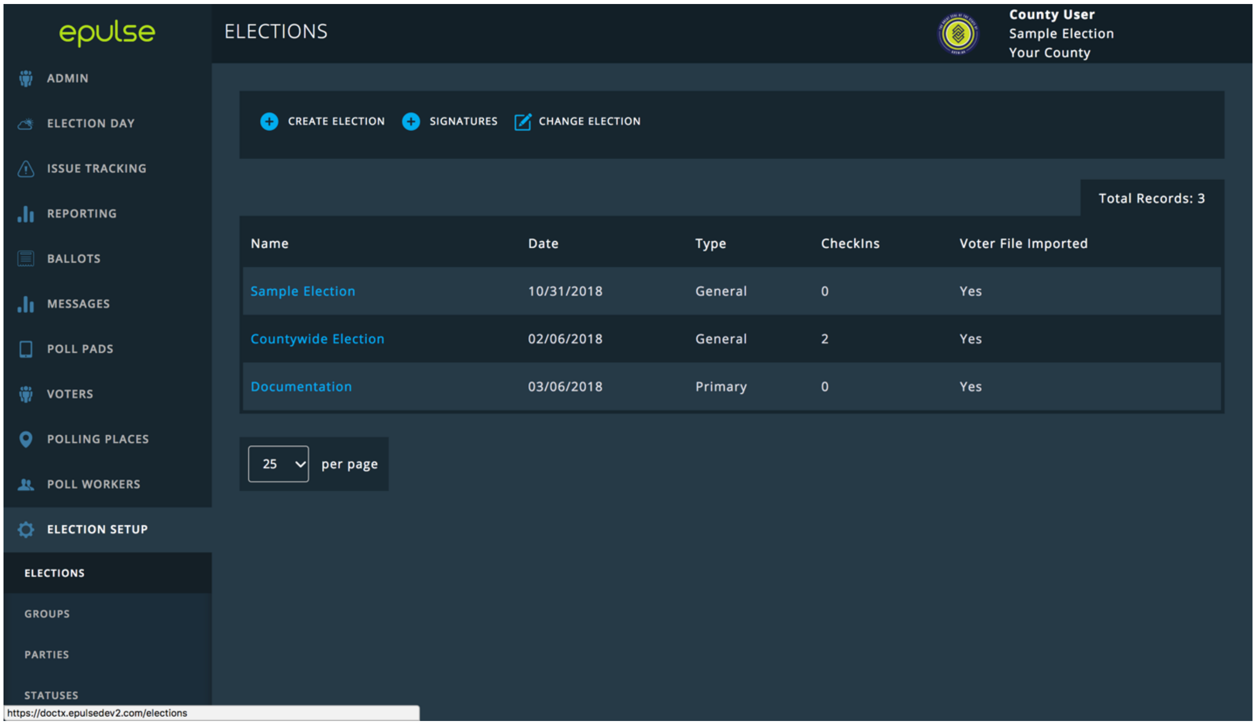
admin
KYdemo
Kentucky

BALLOTS LEFT			FIND A BALLOT
0	0	106	

Total Records: 106

BALLOT STYLE	POLLING PLACE	VOTERS	LEFT TO VOTE	BALLOTS SENT	VOTED	SPOILED	REMAINING
101	Missouri Botanical Garden	363	363	0	0	0	0 (0%)
101	Missouri Botanical Garden	608	608	0	0	0	0 (0%)
101	Missouri Botanical Garden	672	672	0	0	0	0 (0%)
101	Missouri Botanical Garden	444	444	0	0	0	0 (0%)
101	Missouri Botanical Garden	527	527	0	0	0	0 (0%)
201	Anheuser-Busch Brewery	1,404	1,404	0	0	0	0 (0%)

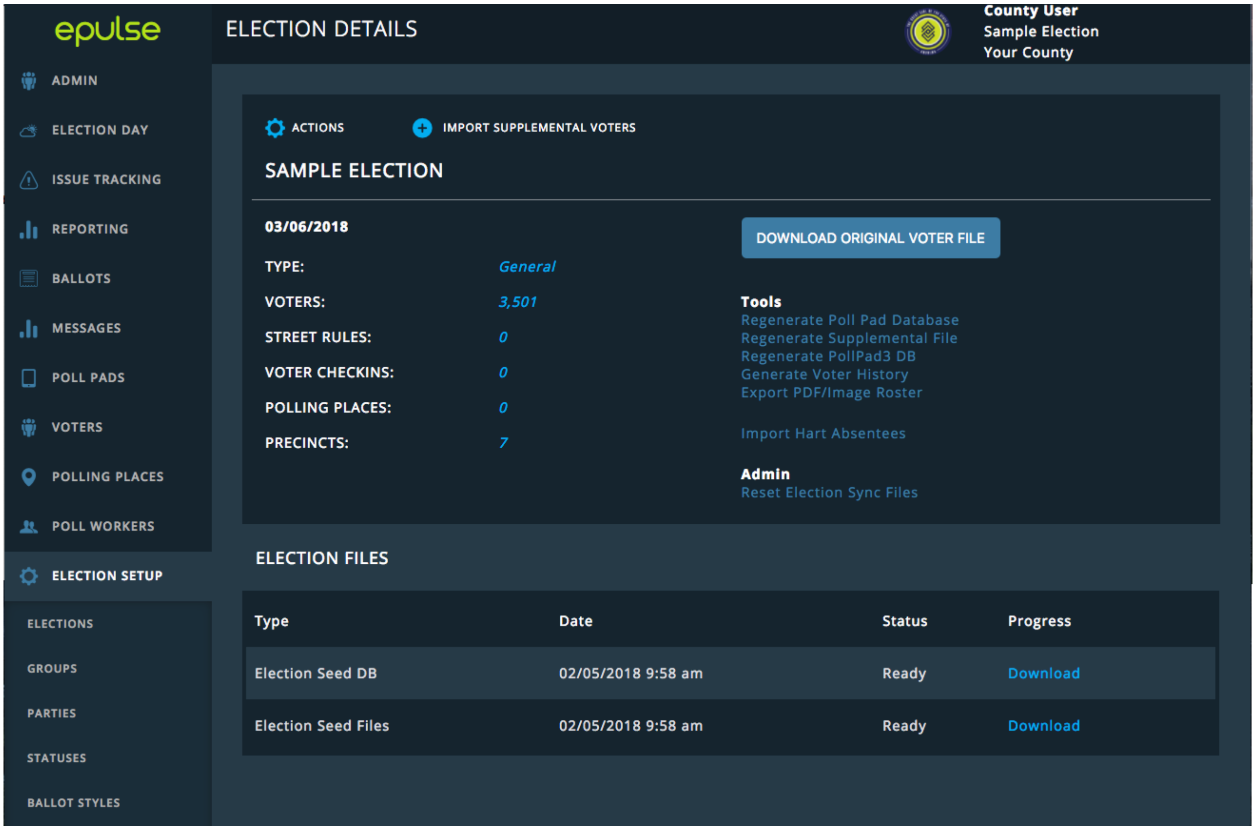
Figures 9.9 and 9.10. Setting up an election in ePulse.



County User
Sample Election
Your County

Total Records: 3

Name	Date	Type	CheckIns	Voter File Imported
Sample Election	10/31/2018	General	0	Yes
Countywide Election	02/06/2018	General	2	Yes
Documentation	03/06/2018	Primary	0	Yes



County User
Sample Election
Your County

SAMPLE ELECTION

03/06/2018

TYPE: *General*
VOTERS: *3,501*
STREET RULES: *0*
VOTER CHECKINS: *0*
POLLING PLACES: *0*
PRECINCTS: *7*

Tools
Regenerate Poll Pad Database
Regenerate Supplemental File
Regenerate PollPad3 DB
Generate Voter History
Export PDF/Image Roster

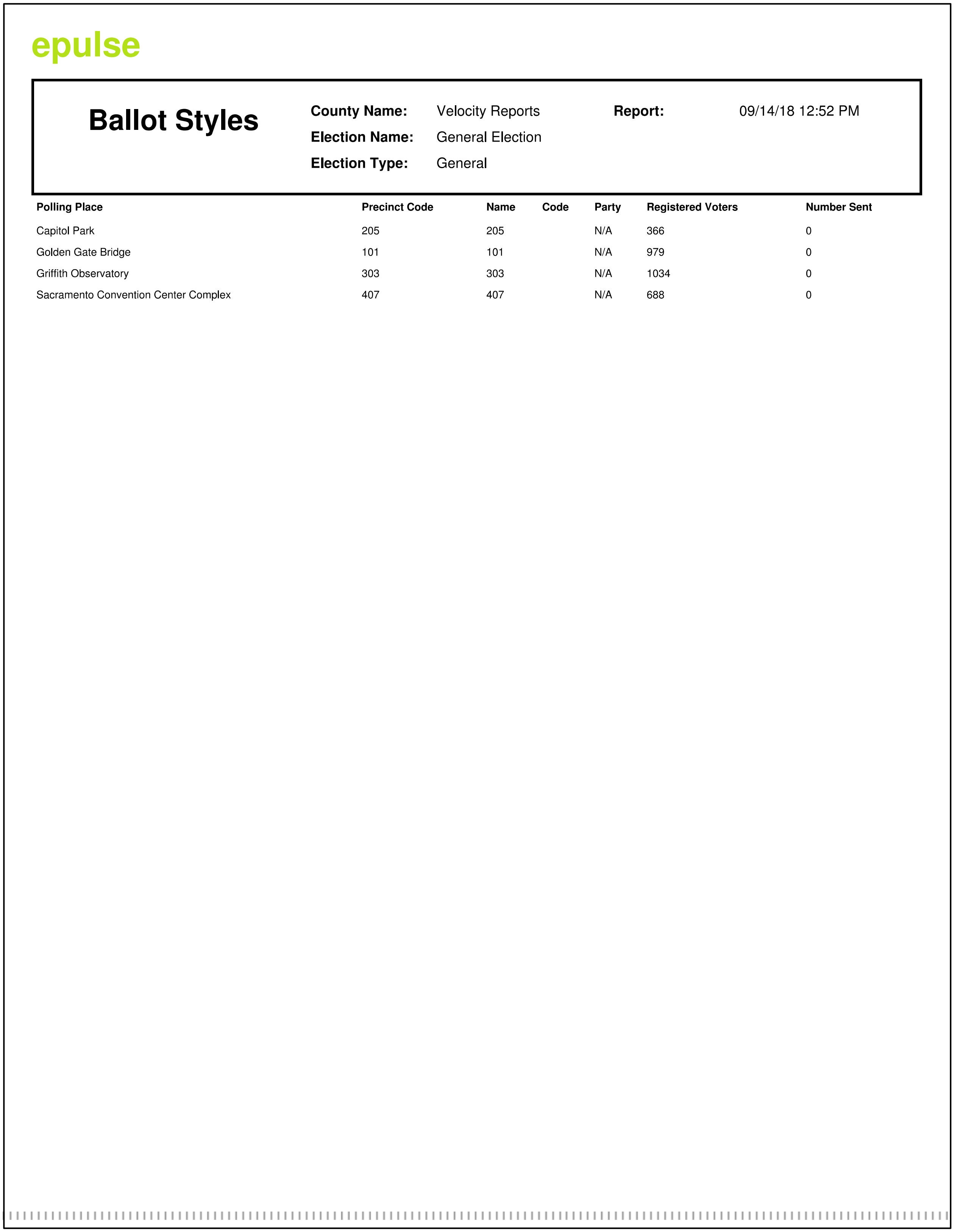
Import Hart Absentees

Admin
Reset Election Sync Files

ELECTION FILES

Type	Date	Status	Progress
Election Seed DB	02/05/2018 9:58 am	Ready	Download
Election Seed Files	02/05/2018 9:58 am	Ready	Download

Figures 9.11. ePulse reports exported to PDF. Ballot styles report.



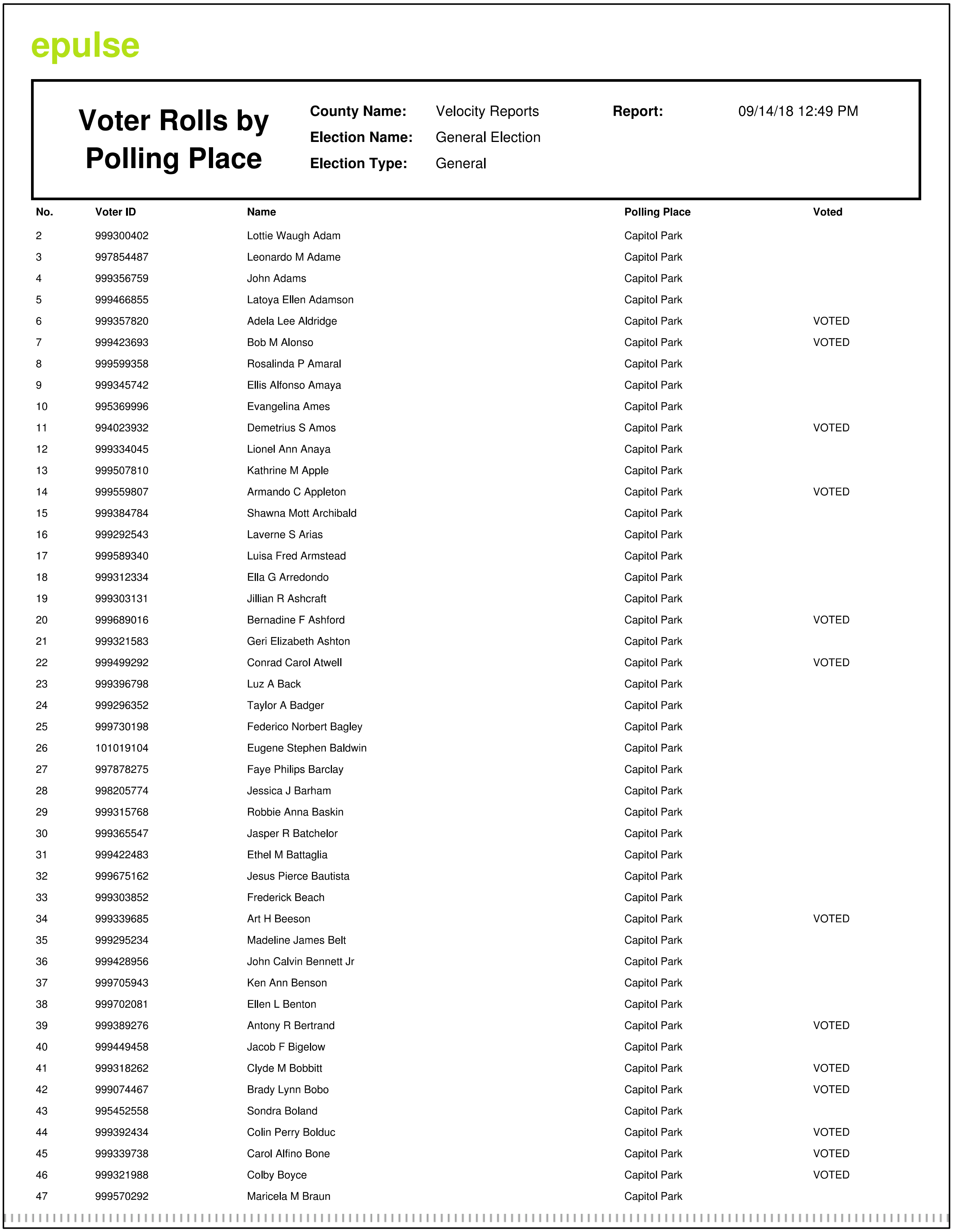
epulse

Ballot Styles

County Name: Velocity Reports
Election Name: General Election
Election Type: General
Report: 09/14/18 12:52 PM

Polling Place	Precinct Code	Name	Code	Party	Registered Voters	Number Sent
Capitol Park	205	205		N/A	366	0
Golden Gate Bridge	101	101		N/A	979	0
Griffith Observatory	303	303		N/A	1034	0
Sacramento Convention Center Complex	407	407		N/A	688	0

Figures 9.12. ePulse reports exported to PDF. Voter rosters/rolls by polling place.



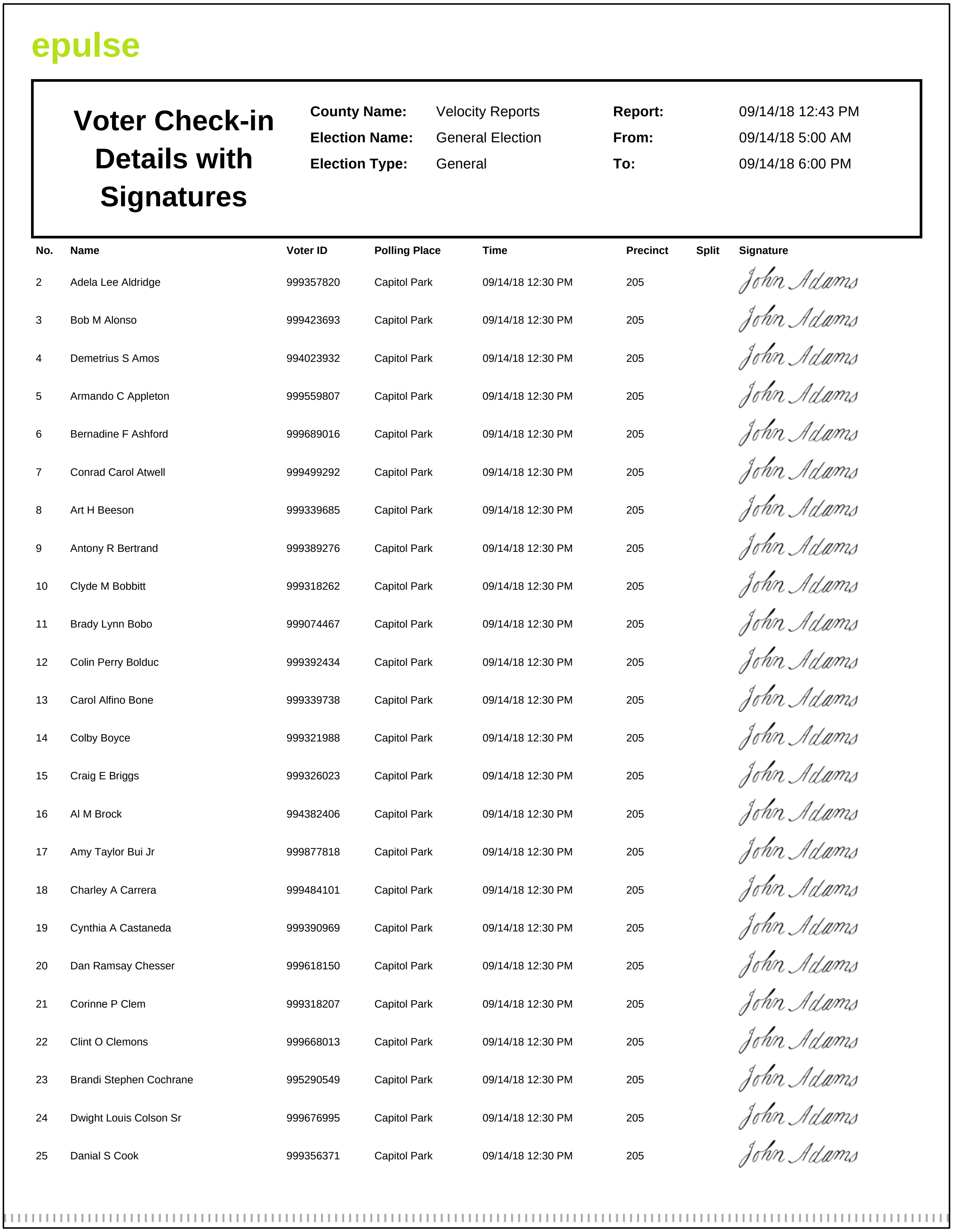
epulse

Voter Rolls by Polling Place

County Name: Velocity Reports
Election Name: General Election
Election Type: General
Report: 09/14/18 12:49 PM

No.	Voter ID	Name	Polling Place	Voted
2	999300402	Lottie Waugh Adam	Capitol Park	
3	997854487	Leonardo M Adame	Capitol Park	
4	999356759	John Adams	Capitol Park	
5	999466855	Latoya Ellen Adamson	Capitol Park	
6	999357820	Adela Lee Aldridge	Capitol Park	VOTED
7	999423693	Bob M Alonso	Capitol Park	VOTED
8	999599358	Rosalinda P Amaral	Capitol Park	
9	999345742	Ellis Alfonso Amaya	Capitol Park	
10	995369996	Evangelina Ames	Capitol Park	
11	994023932	Demetrius S Amos	Capitol Park	VOTED
12	999334045	Lionel Ann Anaya	Capitol Park	
13	999507810	Kathrine M Apple	Capitol Park	
14	999559807	Armando C Appleton	Capitol Park	VOTED
15	999384784	Shawna Mott Archibald	Capitol Park	
16	999292543	Laverne S Arias	Capitol Park	
17	999589340	Luisa Fred Armstead	Capitol Park	
18	999312334	Ella G Arredondo	Capitol Park	
19	999303131	Jillian R Ashcraft	Capitol Park	
20	999689016	Bernadine F Ashford	Capitol Park	VOTED
21	999321583	Geri Elizabeth Ashton	Capitol Park	
22	999499292	Conrad Carol Atwell	Capitol Park	VOTED
23	999396798	Luz A Back	Capitol Park	
24	999296352	Taylor A Badger	Capitol Park	
25	999730198	Federico Norbert Bagley	Capitol Park	
26	101019104	Eugene Stephen Baldwin	Capitol Park	
27	997878275	Faye Philips Barclay	Capitol Park	
28	998205774	Jessica J Barham	Capitol Park	
29	999315768	Robbie Anna Baskin	Capitol Park	
30	999365547	Jasper R Batchelor	Capitol Park	
31	999422483	Ethel M Battaglia	Capitol Park	
32	999675162	Jesus Pierce Bautista	Capitol Park	
33	999303852	Frederick Beach	Capitol Park	
34	999339685	Art H Beeson	Capitol Park	VOTED
35	999295234	Madeline James Belt	Capitol Park	
36	999428956	John Calvin Bennett Jr	Capitol Park	
37	999705943	Ken Ann Benson	Capitol Park	
38	999702081	Ellen L Benton	Capitol Park	
39	999389276	Antony R Bertrand	Capitol Park	VOTED
40	999449458	Jacob F Bigelow	Capitol Park	
41	999318262	Clyde M Bobbitt	Capitol Park	VOTED
42	999074467	Brady Lynn Bobo	Capitol Park	VOTED
43	995452558	Sondra Boland	Capitol Park	
44	999392434	Colin Perry Bolduc	Capitol Park	VOTED
45	999339738	Carol Alfino Bone	Capitol Park	VOTED
46	999321988	Colby Boyce	Capitol Park	VOTED
47	999570292	Maricela M Braun	Capitol Park	

Figures 9.12. ePulse reports exported to PDF. Voter check-in details with signatures.



epulse

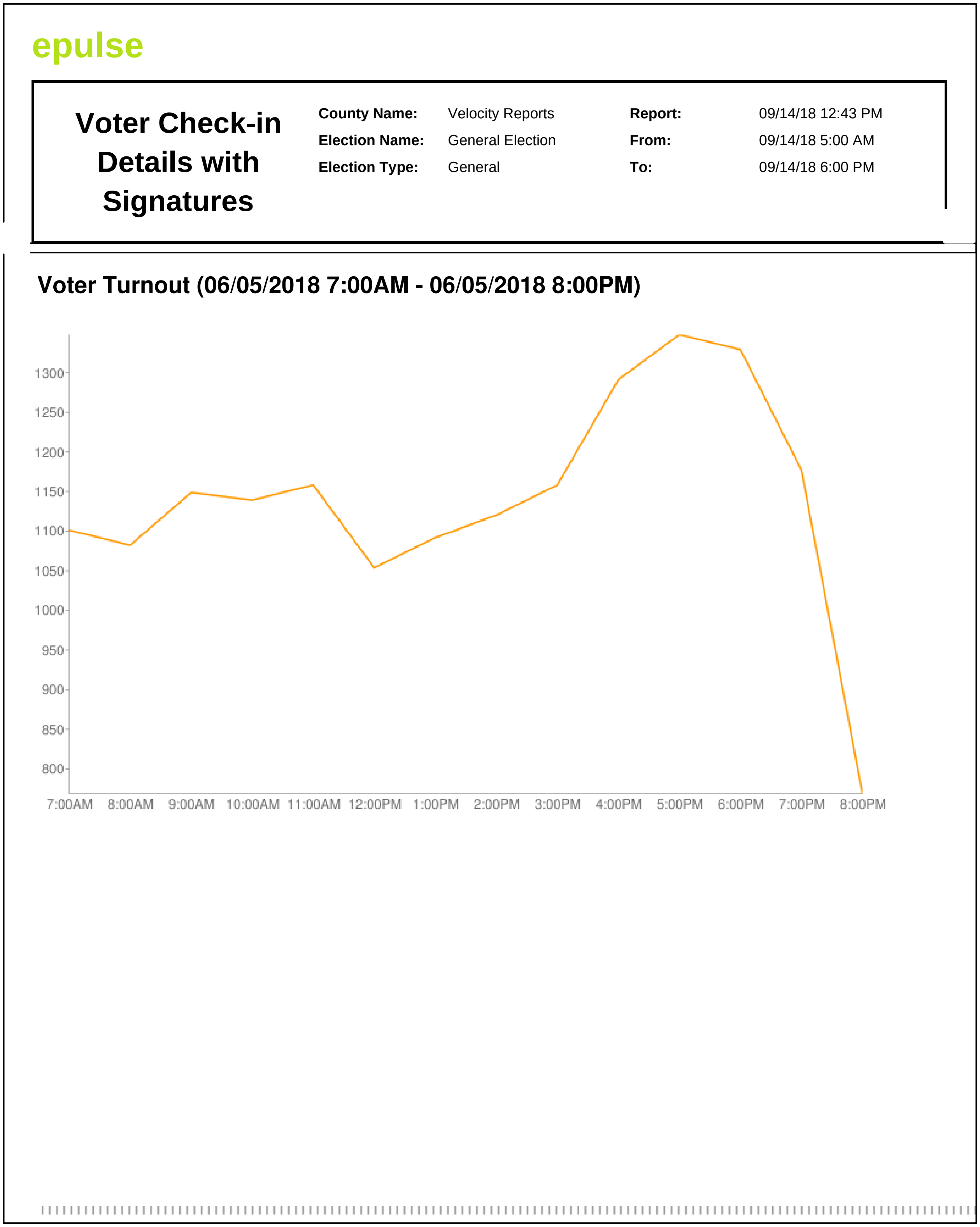
Voter Check-in Details with Signatures

County Name: Velocity Reports
Election Name: General Election
Election Type: General

Report: 09/14/18 12:43 PM
From: 09/14/18 5:00 AM
To: 09/14/18 6:00 PM

No.	Name	Voter ID	Polling Place	Time	Precinct	Split	Signature
2	Adela Lee Aldridge	999357820	Capitol Park	09/14/18 12:30 PM	205		John Adams
3	Bob M Alonso	999423693	Capitol Park	09/14/18 12:30 PM	205		John Adams
4	Demetrius S Amos	994023932	Capitol Park	09/14/18 12:30 PM	205		John Adams
5	Armando C Appleton	999559807	Capitol Park	09/14/18 12:30 PM	205		John Adams
6	Bernadine F Ashford	999689016	Capitol Park	09/14/18 12:30 PM	205		John Adams
7	Conrad Carol Atwell	999499292	Capitol Park	09/14/18 12:30 PM	205		John Adams
8	Art H Beeson	999339685	Capitol Park	09/14/18 12:30 PM	205		John Adams
9	Antony R Bertrand	999389276	Capitol Park	09/14/18 12:30 PM	205		John Adams
10	Clyde M Bobbitt	999318262	Capitol Park	09/14/18 12:30 PM	205		John Adams
11	Brady Lynn Bobo	999074467	Capitol Park	09/14/18 12:30 PM	205		John Adams
12	Colin Perry Bolduc	999392434	Capitol Park	09/14/18 12:30 PM	205		John Adams
13	Carol Alfino Bone	999339738	Capitol Park	09/14/18 12:30 PM	205		John Adams
14	Colby Boyce	999321988	Capitol Park	09/14/18 12:30 PM	205		John Adams
15	Craig E Briggs	999326023	Capitol Park	09/14/18 12:30 PM	205		John Adams
16	Al M Brock	994382406	Capitol Park	09/14/18 12:30 PM	205		John Adams
17	Amy Taylor Bui Jr	999877818	Capitol Park	09/14/18 12:30 PM	205		John Adams
18	Charley A Carrera	999484101	Capitol Park	09/14/18 12:30 PM	205		John Adams
19	Cynthia A Castaneda	999390969	Capitol Park	09/14/18 12:30 PM	205		John Adams
20	Dan Ramsay Chesser	999618150	Capitol Park	09/14/18 12:30 PM	205		John Adams
21	Corinne P Clem	999318207	Capitol Park	09/14/18 12:30 PM	205		John Adams
22	Clint O Clemons	999668013	Capitol Park	09/14/18 12:30 PM	205		John Adams
23	Brandi Stephen Cochrane	995290549	Capitol Park	09/14/18 12:30 PM	205		John Adams
24	Dwight Louis Colson Sr	999676995	Capitol Park	09/14/18 12:30 PM	205		John Adams
25	Danial S Cook	999356371	Capitol Park	09/14/18 12:30 PM	205		John Adams

Figures 9.12. ePulse reports exported to PDF. Voter check-in details with signatures.



epulse

Voter Check-in Details with Signatures

County Name: Velocity Reports
Election Name: General Election
Election Type: General
Report: 09/14/18 12:43 PM
From: 09/14/18 5:00 AM
To: 09/14/18 6:00 PM

Voter Turnout (06/05/2018 7:00AM - 06/05/2018 8:00PM)

KNOWiNK's Experience

State of Rhode Island

The State of Rhode Island partnered with KNOWiNK and ran successful concurrent elections involving 781,752 registered voters at 502 polling places. Rhode Island has 56 ePulse users. Of the 56 users, there are 47 groups types which limits their view to only their specific jurisdiction. ePulse is set up for Rhode Island with five different default roles to use as templates, and then the State can limit or add permissions depending on needs. They use ePulse messaging to contact different polling places on the Poll Pad.

The initial order included 200 Poll Pads with the ePulse management system, which provides a real-time dashboard to monitor overall election activity. The State then ordered an additional 1,500 units in 2017. The budget and the target dates were both met, and the 49 elections they have run on the Poll Pad have all been successful.

The project scope includes:

- Election day voter check-in
- Peer-to-peer EPB synchronization
- Server sync to ePulse, giving real time dashboard updates and statistics
- Semi-closed Primary elections, customized party voting rules via ePulse
- Concurrent multiple users and elections in ePulse

2016

FIRST ELECTION

781,752

REGISTERED

1,600

POLL PADS

"Poll workers and voters especially appreciated how easy the Poll Pads are to use...it's really a wow factor [!]."

Nellie Gorbea

Rhode Island Secretary of State

"Nice Job KNOWiNK team. I'm on a call with the advisory board of the center of technology and civic life. Just sang the praises of KNOWiNK and numerous others on the call chimed in with nothing but terrific remarks! Great work!"

Rob Rock

Hennepin County, Minnesota

Hennepin County, the largest county in Minnesota, selected the Poll Pad solution and began integrating them into their elections in 2016, with Minneapolis deploying the Poll Pad in 2017. Hennepin uses ePulse module iTrack Issue Tracking for Election Day issue reporting, technician assignments, and resolution reporting. In phase one, KNOWiNK configured and deployed 1,100 Poll Pads to 423 polling locations for the 2016 state primary and general elections. In phase two, 765 additional Poll Pad units were deployed beginning in May 2017.

Since 2016, Minnesota's board of elections has approved the Poll Pad for statewide deployment to be determined by individual counties and 53 counties have selected the Poll Pad totaling more than 5,000 devices. We successfully implemented the Poll Pad solution in these counties for their August 2018 Primary Election.

2016

FIRST ELECTION

780,000

REGISTERED VOTERS

1,865

POLL PADS

The project scope includes:

- Develop data migration protocols between the County's existing voter registration system and KNOWiNK's ePulse/Central Command election management system.
- Customize the Poll Pad Election Day Registration module to meet the specific needs of the Count.
- Design and install dedicated network infrastructure to manage 1,865 electronic poll books in 47 separate municipalities.
- Provide training consulting services to assist County in developing their comprehensive poll worker training program.
- Provide on-site support personnel for the County's first Election Day deployment

Outcomes Achieved

Hennepin County successfully deployed the KNOWiNK Poll Pad in 2016 in the Primary and General elections across the County's suburban municipalities. Outcomes include faster election day registration; improved data for post-election processing; cost savings in post-election processing; better metrics on voter turnout; fewer provisional ballots; and decreased unnecessary Election Day registrations.

> ***"It's an important step for us to modernize the election process... It'll bring that process into the 21st century."***
>
> Ginny Gelms, Elections Manager | Hennepin County, MN

Washington, D.C.

KNOWiNK provided an EPB solution with ePulse EPDMS for use during early voting in satellite Vote Center locations and during Election Day in precinct-specific polling places. D.C. uses ePulse messaging to Poll Pads, serving synchronizing during early voting and on Election Day, and in December of 2018 they piloted iTrack Issue Tracking.

The project scope includes:

- Provided training support, consulting, and setup Early Voting Centers two weeks prior to Election Day with daily data migration.
- Develop a processing work flow for Same Day Registration (SDR) during early voting in Vote Centers and on Election Day in precinct-specific polling places.
- Goals of the SDR included: Easy data entry for Election Officers; uniformity of data where possible (e.g., address street names); and determination of proper ballot.
- Develop data migration tools between DCBOE's voter registration system and KNOWiNK's Management Control Dashboard, ePulse.
- Provide training support services to DCBOE staff for poll worker and staff training.
- Provide on-site election support for Election Day and pre-election preparation.

Outcomes Achieved

Washington, D.C. successfully deployed the KNOWiNK Poll Pad in 2016 in the Primary and General elections. Use of the Poll Pad Solution improved Washington, D.C.'s Early Voting process; reduced lines on Election Day; and reduced the number of provisional voters.

2016

FIRST ELECTION

617,164

REGISTERED VOTERS

900

POLL PADS

> ***“Poll Pad was a big improvement over the legacy system it replaced in 2016, both in the Primary and General Elections. The District aggressively rolled out new voting equipment and poll book system concurrently in June. Poll Pad’s intuitive setup and operation, safeguards against error, top tier customer support, and user-friendliness for the poll workers were all big contributors to the successful 2016 rollout.”***
>
> District of Columbia Board of Elections

For confidence in ePulse security, we have attached an overview of KNOWiNK’s security solution.

Clarification Question

Please describe in detail how the EPDMS data can be transferred to the Epoll and transferred back from the Epoll. Is is possible to do this without an over-the-air technology like Bluetooth or WiFi?

The system is flexible and built to be used in several ways to accommodate customer preferences. While we typically recommend customers use the secure AWS GovCloud to load data onto Poll Pads, numerous customers do not use the cloud and we are more than happy to offer our solution without cloud connectivity.

KNOWiNK offers three options to transfer data to the Poll Pad and back from the Poll Pad to EPDMS ePulse:

1. iSync Drive

2. Poll Pad as a server

3. Mac Mini Server

iSync Drive

KNOWiNK has developed a secure device, known as iSync, that allows for encrypted data transfer to and from the Poll Pad application. All data loaded to the Poll Pads and iSync drives is encrypted in transit and at rest. Elector list data and update files can be extracted from the Poll Pad and put onto the iSync drives. In order to connect to our application, the device has been certified by Apple and issued a certificate by Apple that allows it to communicate with the Poll Pad application. All data included on the iSync drive is fully encrypted using 256 bit AES encryption and is validated by a certificate stored on the keychain of the iOS device.

Using iSync, the GASOS and Counties may import voter registration into ePulse, KNOWiNK's election management system. ePulse is used to build elections and creates the file with the voter registration and election details to load onto the Poll Pads for voter in early Absentee in-person voting and on Election Day. From ePulse, the file is loaded onto KNOWiNK's proprietary iSync drives and then loaded onto the Poll Pads. The data is encrypted at rest and in transit on the iSync drive. It securely connects to the iPad using the Lightning port.

A sample iSync user guide is provided on the pages following the summaries of the Poll Pad as a Server and Mac Mini Server options.

Poll Pad as a Server

Poll Pad as a Server is a feature that is capable of transferring encrypted voter information between Poll Pads. The Server Poll Pad is able to download voter and check-in data from ePulse, encrypted via HTTPS and at rest in an encrypted archive. From there, the file can be imported directly to the server pad itself or to the client Poll Pads of the serving Poll Pad.

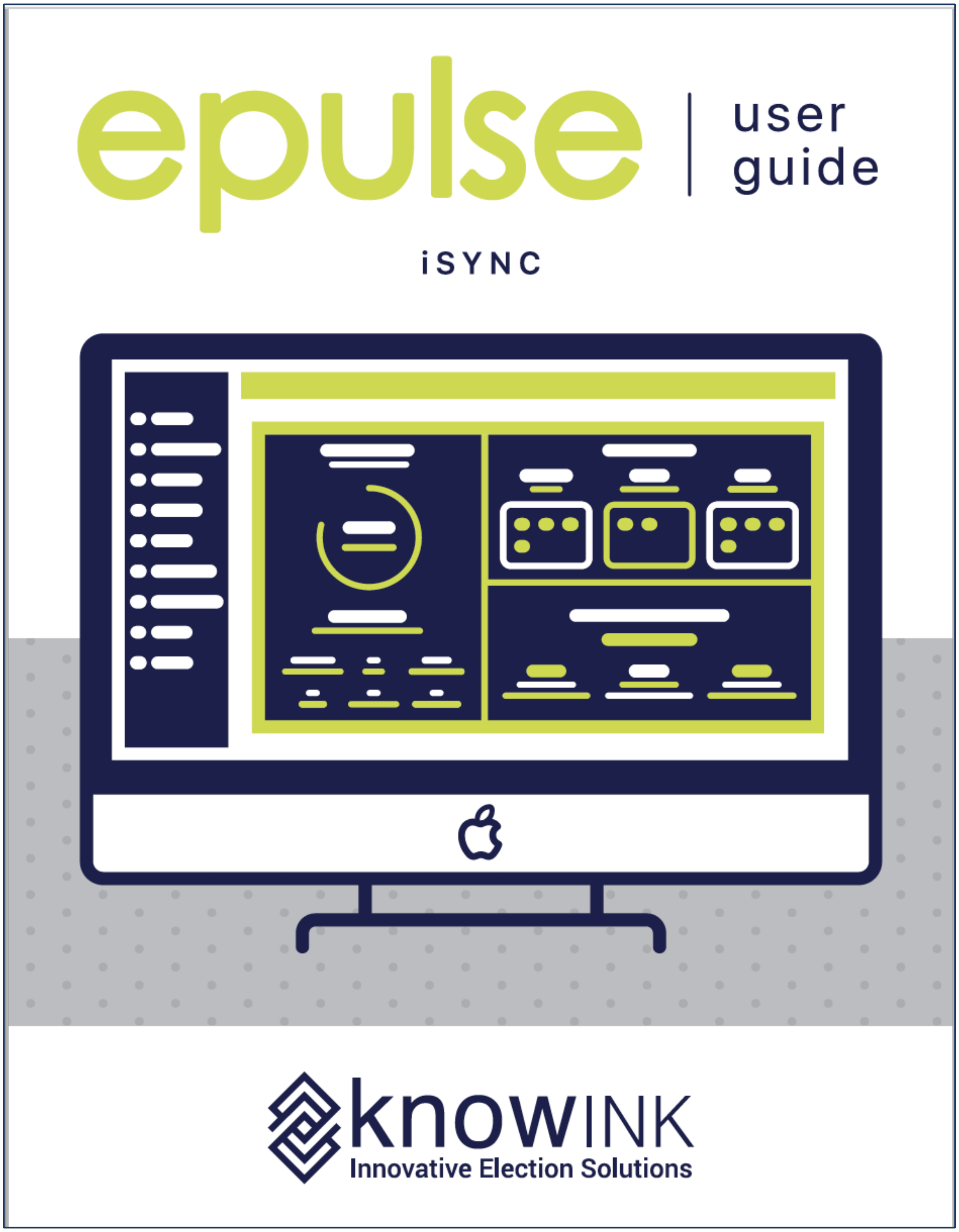
Mac Mini Server

Mac Mini Server is a feature that is capable of utilizing the existing network infrastructure to deploy the Poll Pad database over the local network. The Mac Mini is able to store the database locally and use the local network to deploy the voter file to the Poll Pads rather than downloading the file from the cloud on each device. Download speeds dramatically increase with this method, since it is limited to LAN (local) bandwidth instead of WAN (internet) bandwidth.

Mac Mini Requirements:

To transfer the downloaded archive to client Poll Pads, this feature requires a wireless access point with robust connectivity (e.g., a Meraki AP) to be configured, and a static IP addresses configured for each Poll Pad. Poll Pad as a Server works optimally for election sizes of less than 800,000 voters.

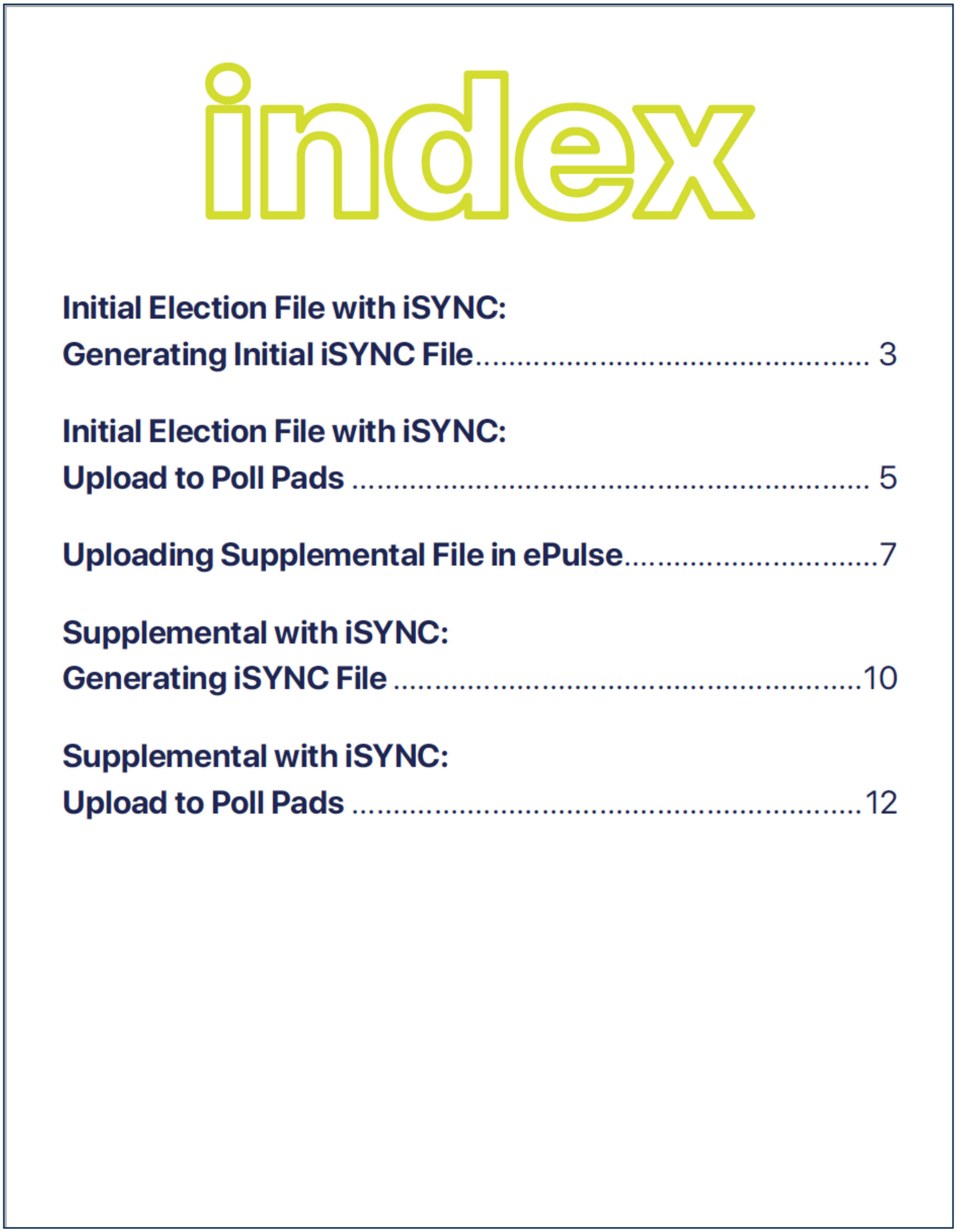
Serving Poll Pads must be an iPad Pro. Client iPads must be specified as iPad Air 2’s or above.



epulse | user guide

iSYNC

knowINK
Innovative Election Solutions



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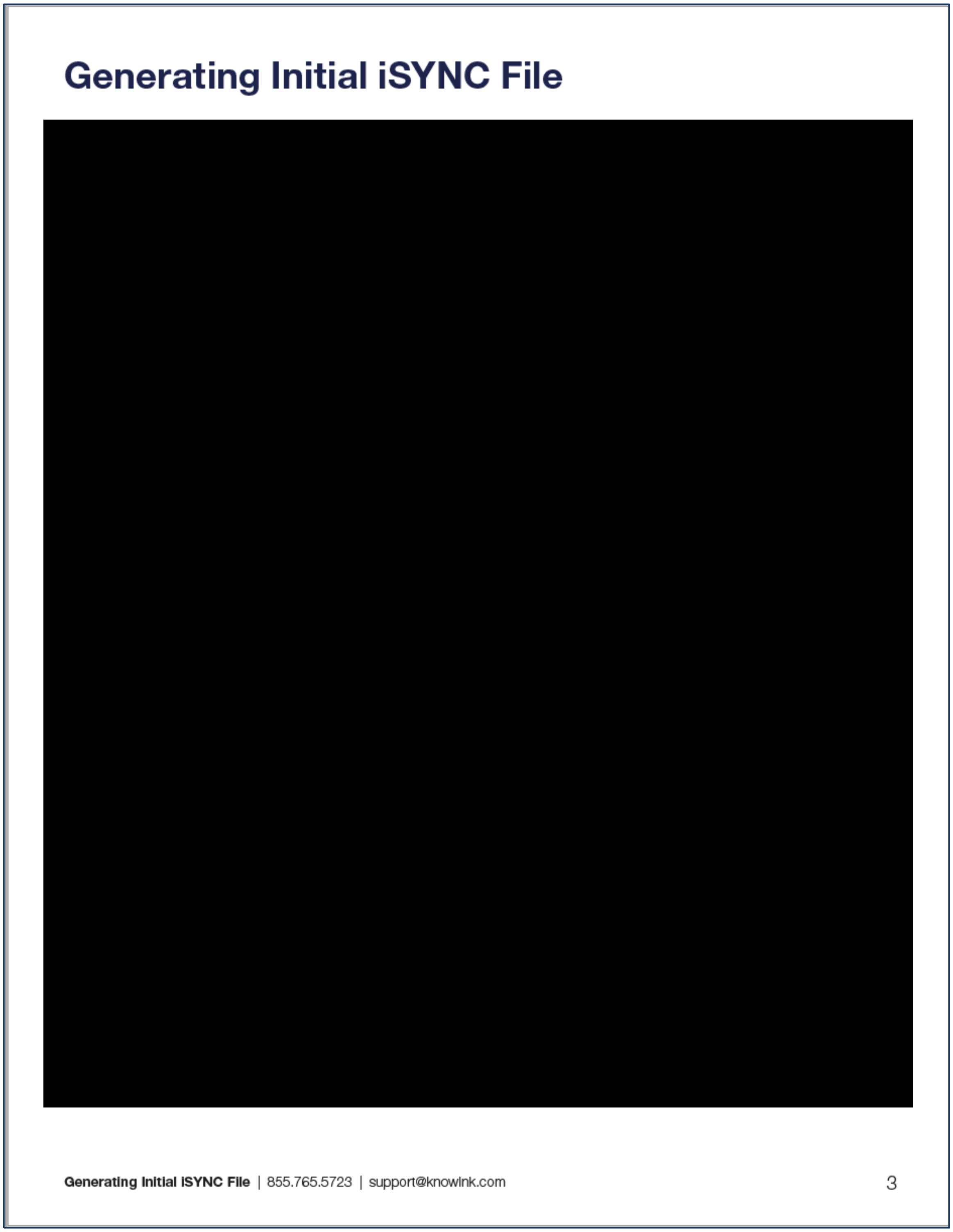
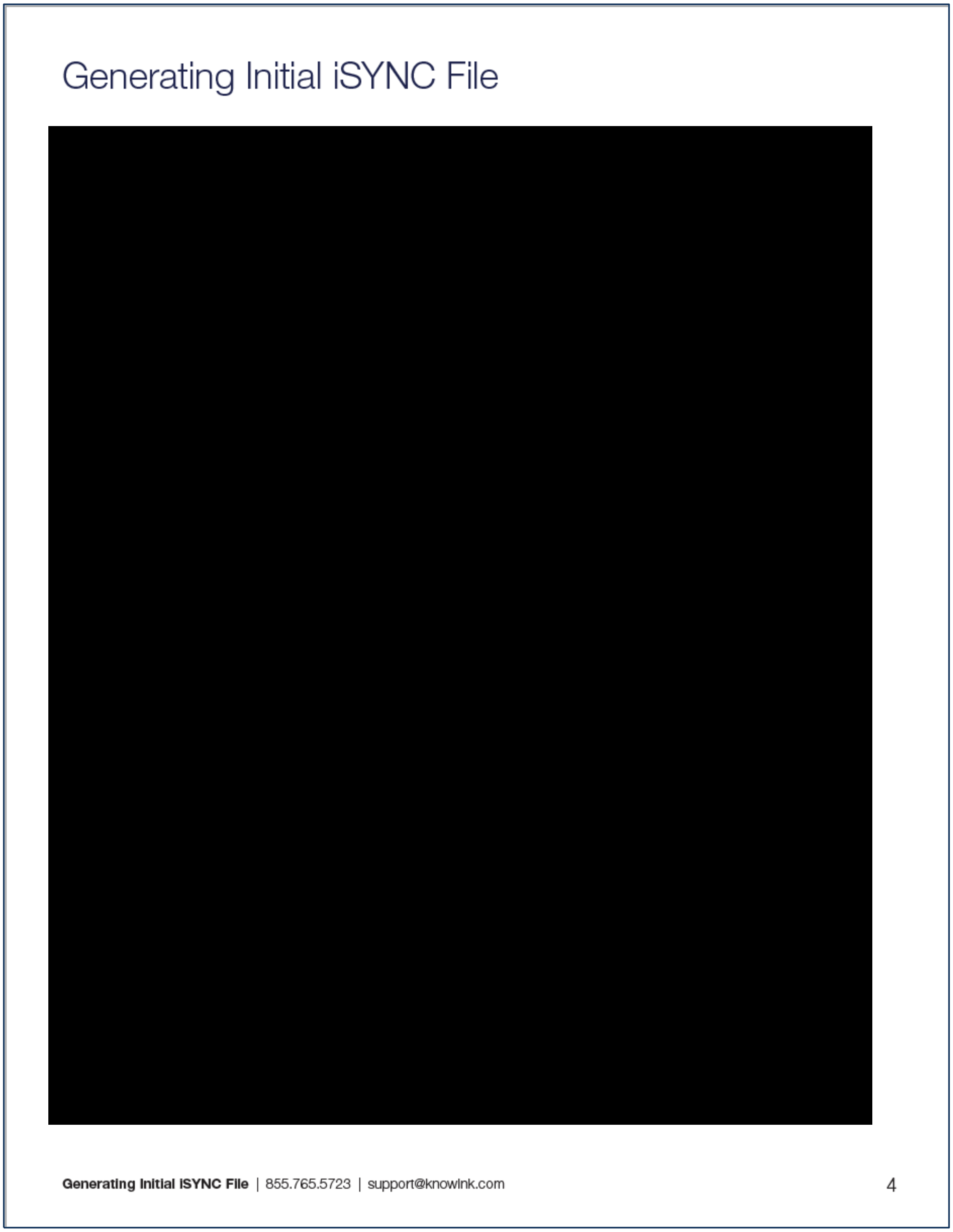


Generating Initial iSYNC File

[redacted]

Generating Initial iSYNC File | 855.765.5723 | support@knowink.com 3



Generating Initial iSYNC File

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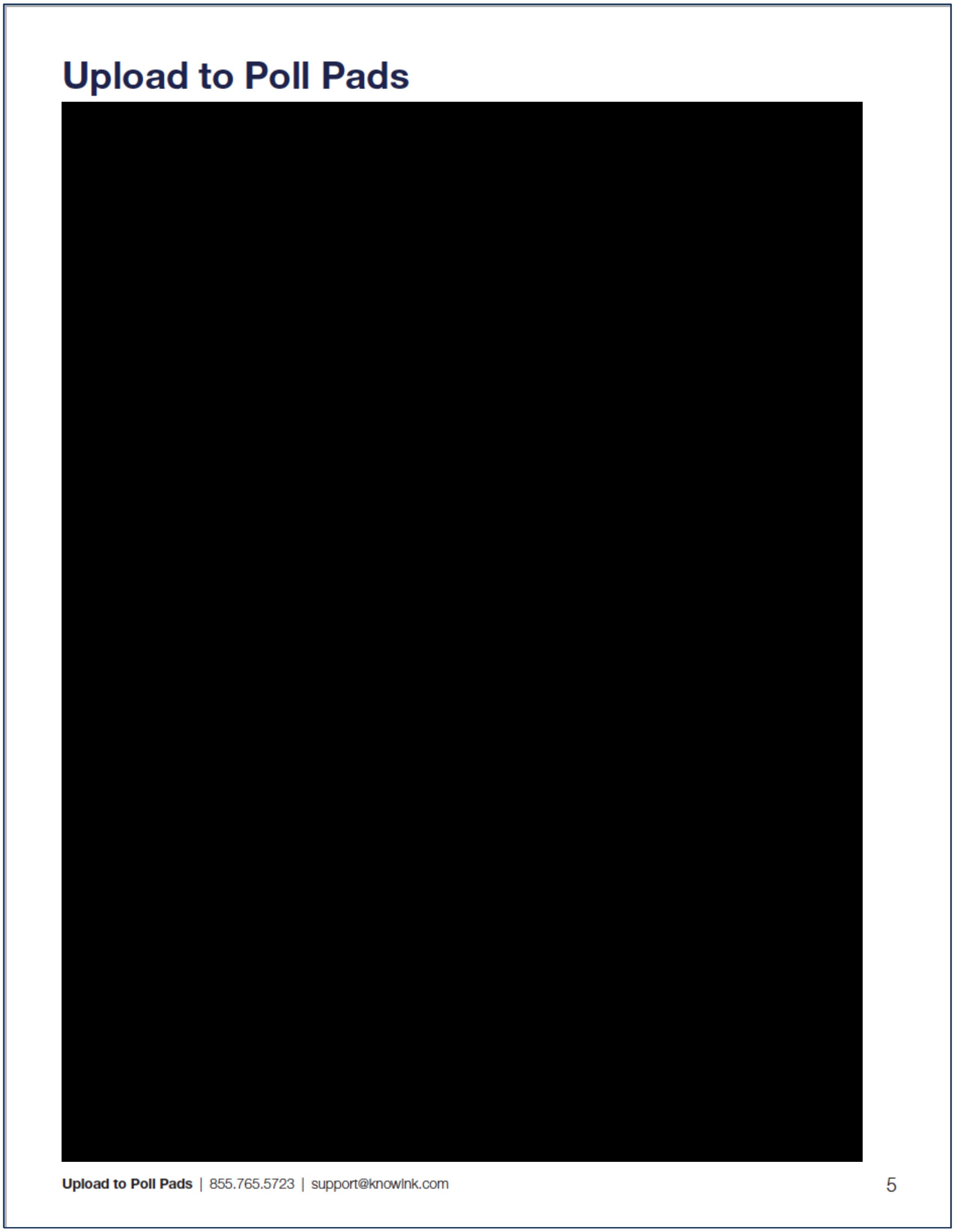

Upload to Poll Pads

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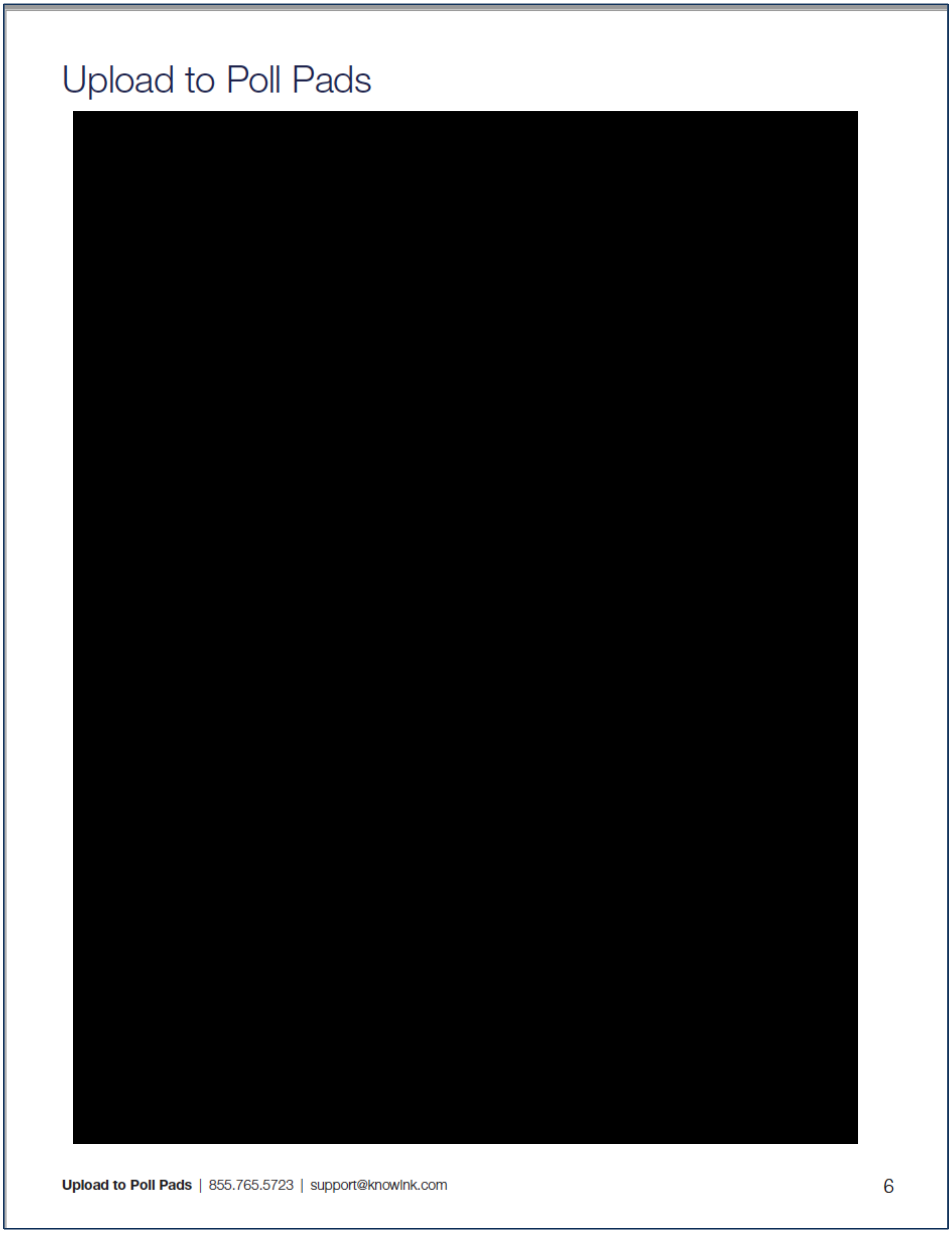

Upload to Poll Pads

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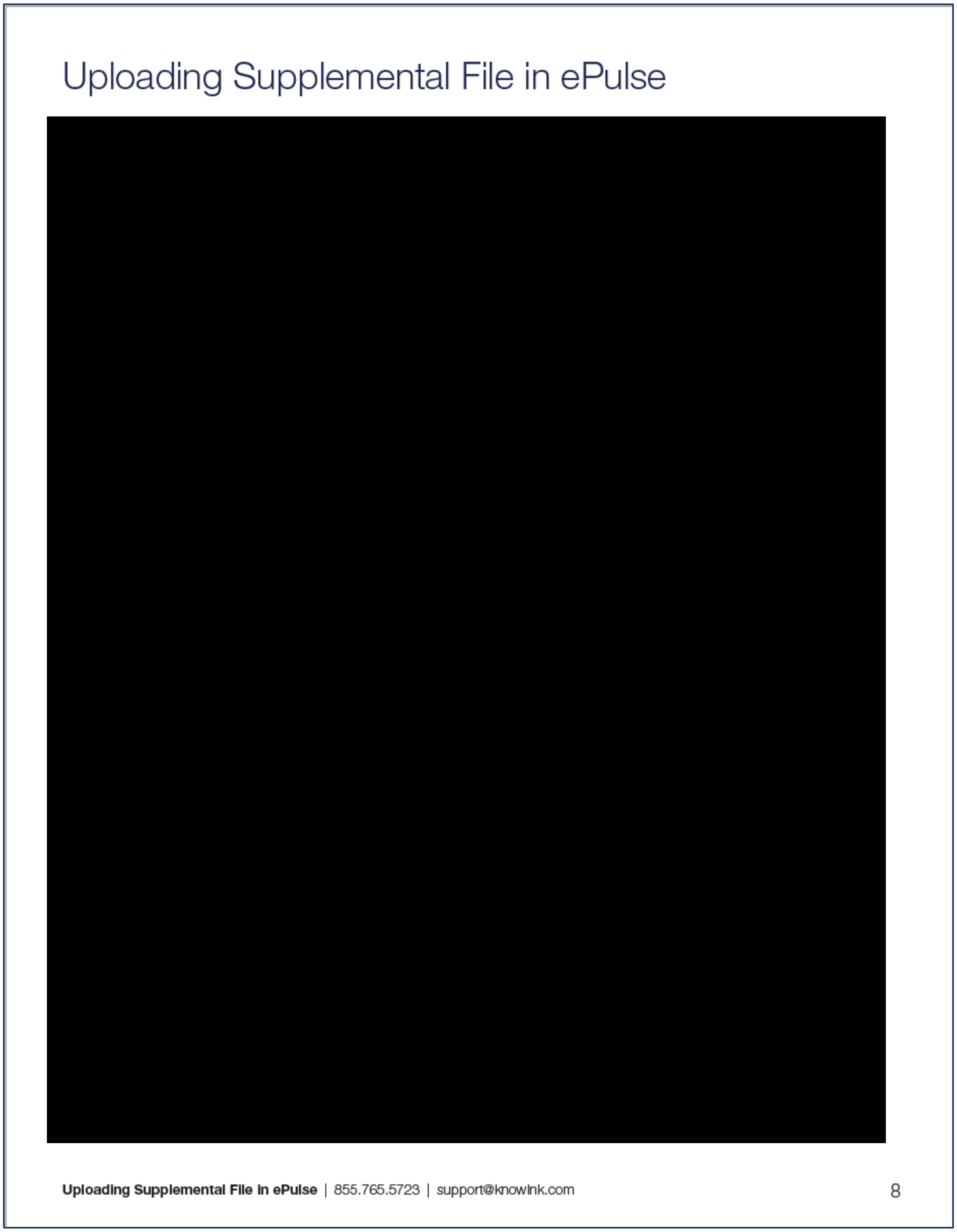
Uploading Supplemental File in ePulse

[redacted]

Uploading Supplemental File in ePulse | 855.765.5723 | support@knowink.com 7



Uploading Supplemental File in ePulse

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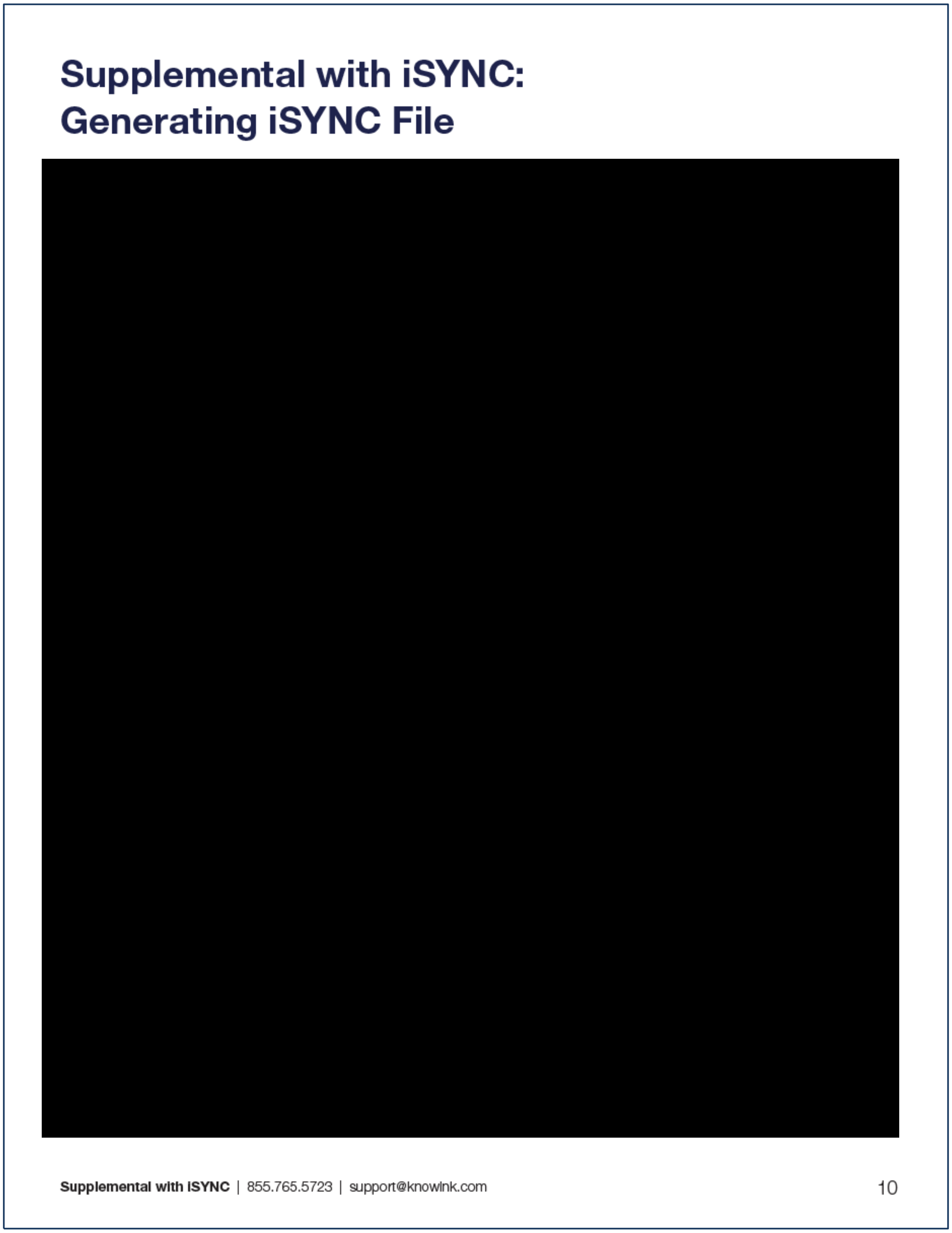
[redacted]



Supplemental with iSYNC: Generating iSYNC File

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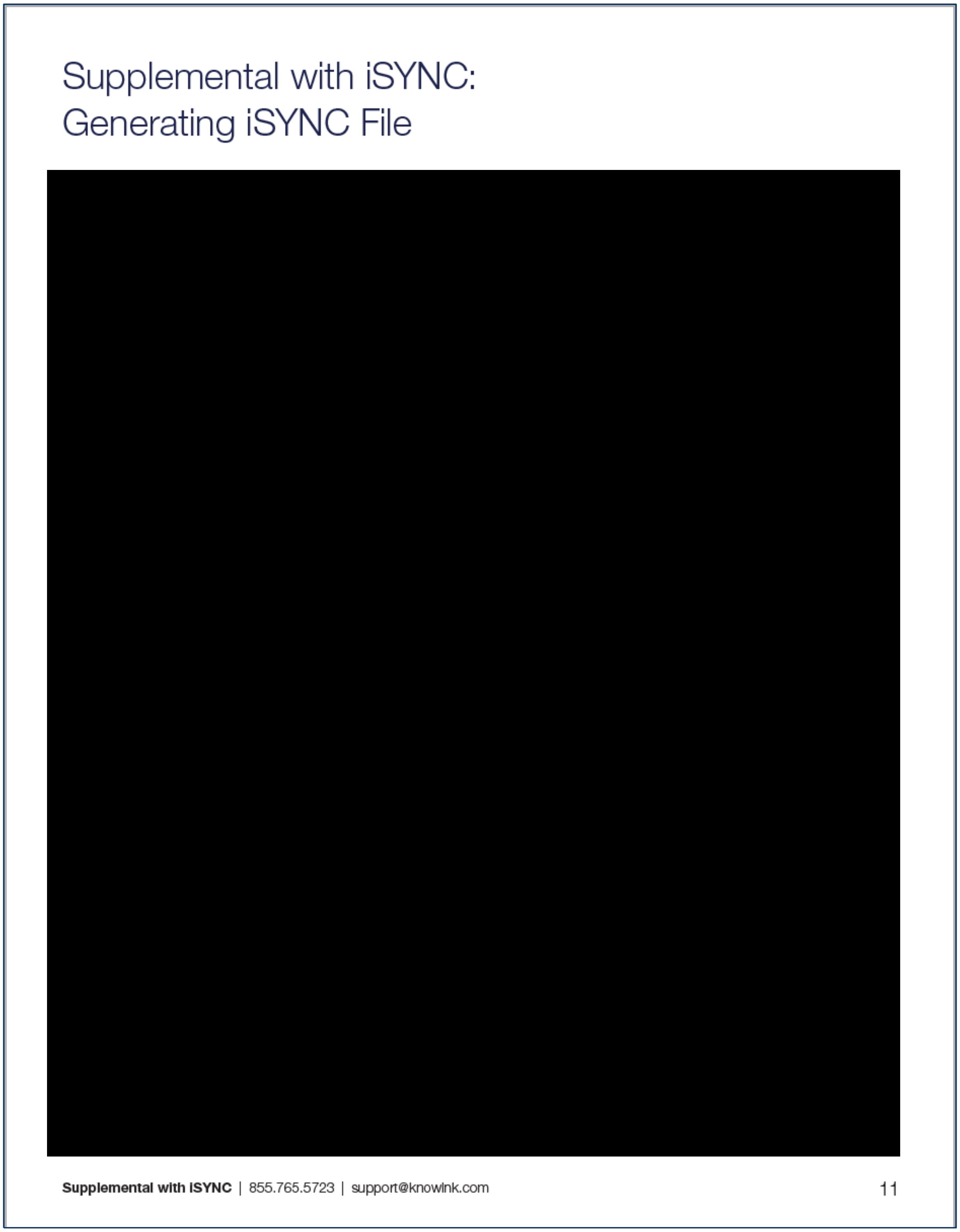

Supplemental with iSYNC: Generating iSYNC File

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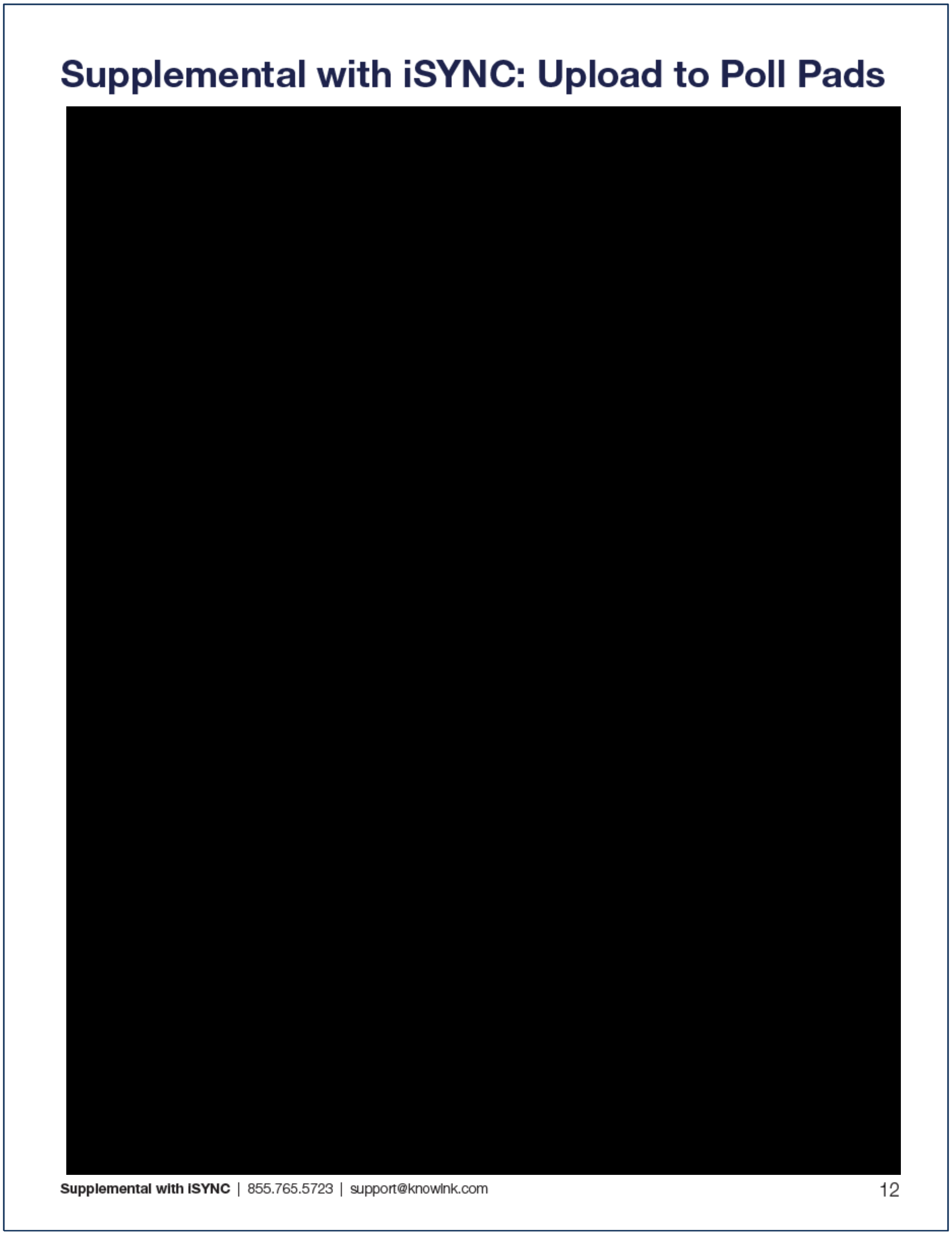
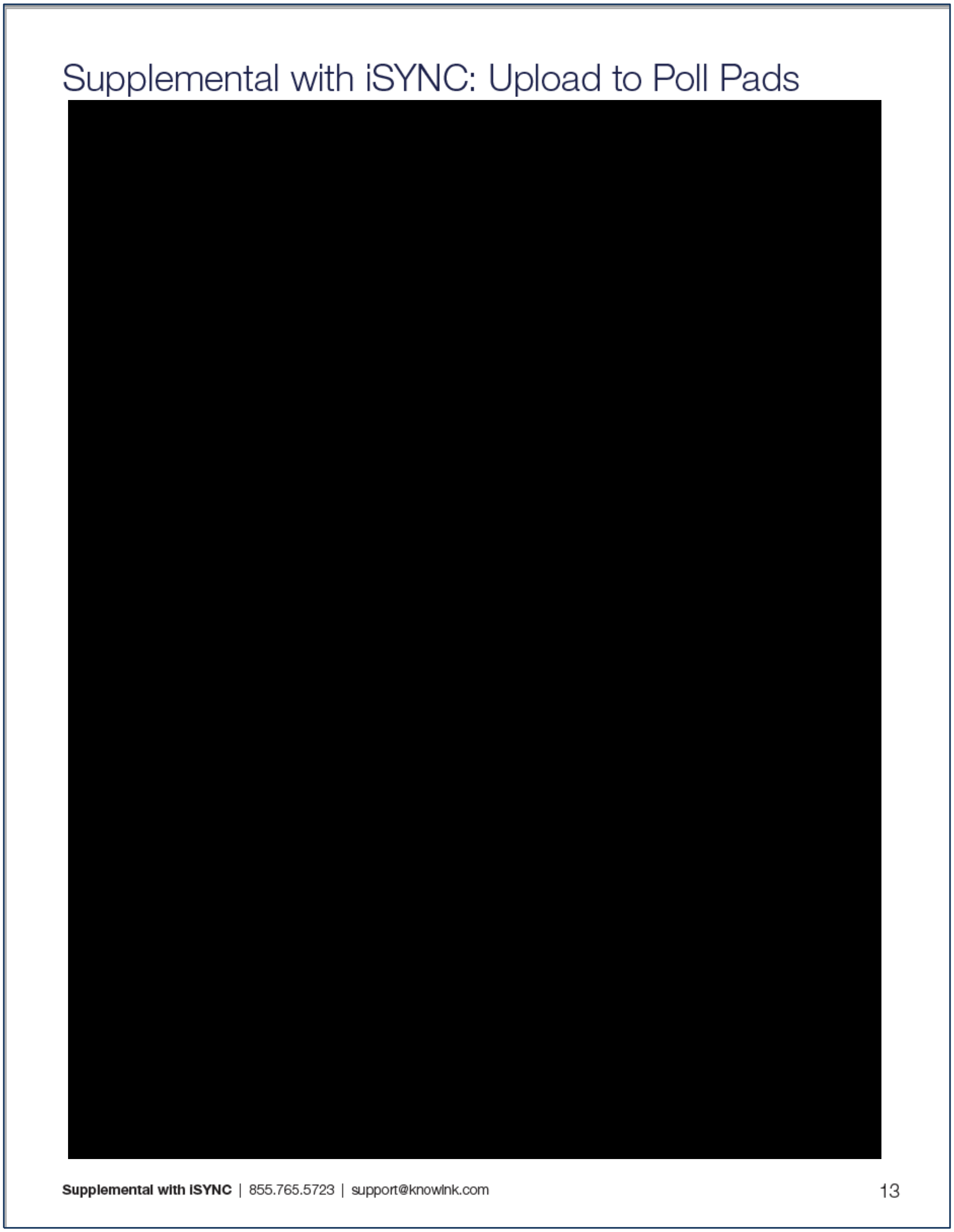


Supplemental with iSYNC: Upload to Poll Pads

[redacted]

Supplemental with iSYNC | 855.765.5723 | support@knowink.com 12



Supplemental with iSYNC: Upload to Poll Pads

[redacted]

Supplemental with iSYNC | 855.765.5723 | support@knowink.com

13

Section 7 – Electronic Poll Book (EPoll)

File 7-2 EPoll Media

7.2 Describe how election configuration information is loaded. Is it done via encrypted, removable memory devices created by the EPDMS or through direct a connection to EPDMS through a LAN?

The State has the option to load election configuration information from the ePulse EPDMS to the EPoll devices using network connectivity or LAN connection in the central GASOS office, or with KNOWiNK's secure proprietary removable memory device, the iSync flash drives. All data in transit and at rest is encrypted using multiple certified and proven security methods. All of the above methods provide a secure method for transferring encrypted election configuration data.

Once connected, the voter files are loaded onto the Poll Pad with the correct precinct information and State voter data, typically within ten minutes or less depending on the size of the file. For seven million voters, the data may take ten to 15 minutes to load.

If the State decides to allow network connectivity in the future, administrators can load the voter data and election configuration information to the Poll Pads remotely using encrypted traffic and a virtual private network hosted by Amazon Web Services GovCloud.

Apple inherently blocks removable memory from being connected to an iPad. KNOWiNK has developed a secure device, known as iSync, that allows for data transfer to and from the Poll Pad application. In order to connect to our application, the device has been certified by Apple and issued a certificate by Apple that allows it to communicate with the Poll Pad application. All data included on the iSync drive is fully encrypted using 256 bit AES encryption and is validated by a certificate stored on the keychain of the iOS device. While iSync is available and can make the Poll Pad easier to use, especially when a quick and reliable network connection is not available, it is not required for use.

Clarification Question

How are Epolls connected to other Epolls at a polling location to allow for data to sync? How will the proposed EMS assist GOSOS in preparing 159 individual databases within 25 business days, where the county has a local race and a statewide race?

To network two or more Poll Pads at a single polling location, our solution uses peer-to-peer (P2P) technology. P2P has the ability to use Bluetooth, ad hoc WiFi, and infrastructure WiFi (any individual or combination of the three broadcasts) to synchronize additions, modifications, and check-in data instantly between Poll Pads.

P2P does not require internet connectivity to function. With P2P, each Poll Pad syncs its data to other Poll Pads in the voting location to ensure data is redundantly stored in case there is theft or device failure. The P2P synchronization automatically uses the strongest broadcast available to communicate between Poll Pads. If a voter were to sign in at a second check-in station, the Poll Pad will issue a prompt barring the check-in on the second device.

If there were a power outage, the Poll Pad application can continue checking-in voters. The Poll Pads can operate during a power outage for up to ten hours. The system is highly fault tolerant and has status lights to highlight how different components are functioning. For instance, the top bar of the application indicates the current status of the printer, network connectivity, and device-to-device communication.

The EMS (ePulse) has a simple, streamlined process for allowing the GASOS to create an election and import data to prepare it for all 159 counties in Georgia. ePulse is designed for the jurisdiction itself to create and load data into the EPBS system. A simple five-step process guides the user through uploading voter data and processing it in a format that can be used in Poll Pad. KNOWiNK can modify the system to allow one election creation process from the statewide level to allow for database creation at all 159 counties in one process. This process should take 1-2 hours at the SOS level to complete. KNOWINK could also help the SOS to create a live connection to the state voter registration system to automatically import initial voter data and subsequent voter changes into ePulse to prepare for the election. We follow a similar process for setting up elections in Rhode Island.

A sample ePulse election creation guide is provided on the following pages. A custom guide will be created for Georgia following contract award.

epulse

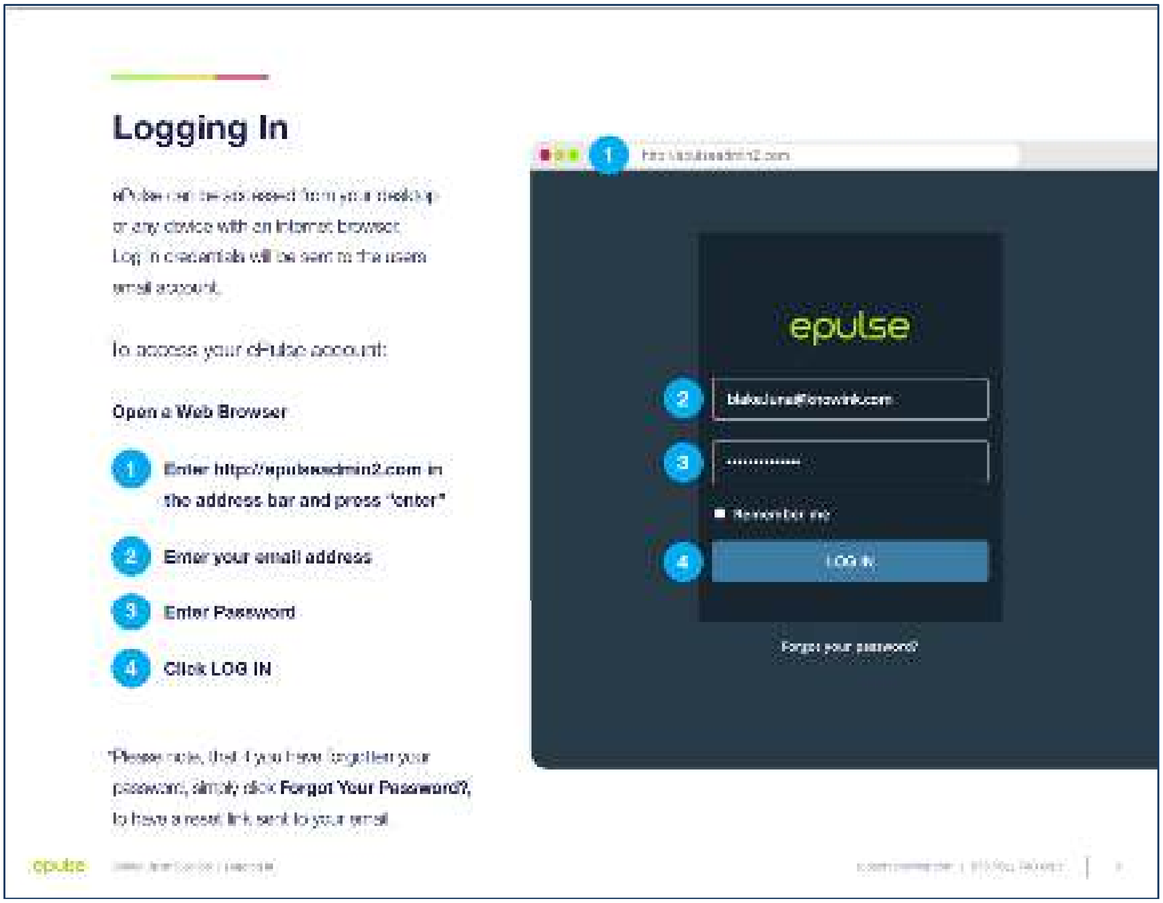
Setting Up an Election

Ohio How to Guide

Powered by

knowINK

Table of Contents



Logging In

ePulse can be accessed from your desktop or any device with an Internet browser. Log in credentials will be sent to the users email account.

To access your ePulse account:

Open a Web Browser

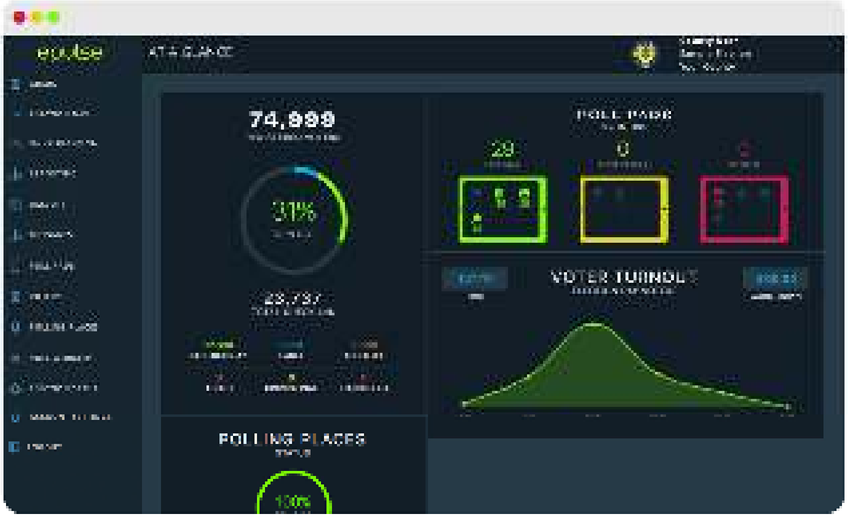
1. **Enter http://epulseadmin2.com in the address bar and press "enter"**
2. **Enter your email address**
3. **Enter Password**
4. **Click LOG IN**

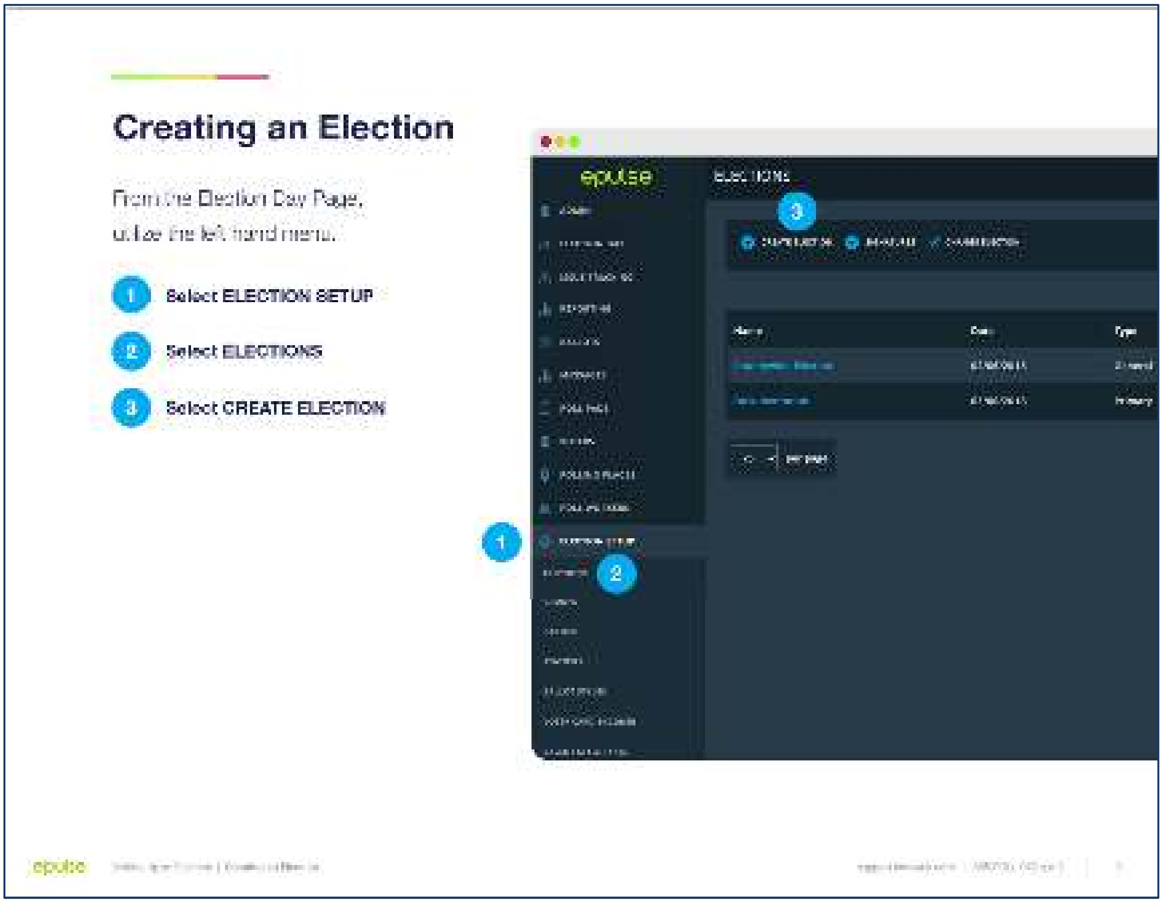
*Please note, that if you have forgotten your password, simply click **Forgot Your Password?**, to have a reset link sent to your email

http://epulseadmin2.com

blake.luna@knowink.com

In order to begin creating your election, first navigate away from the **Election Day** page, by utilizing the multi-tab menu located on the left hand side of the screen.

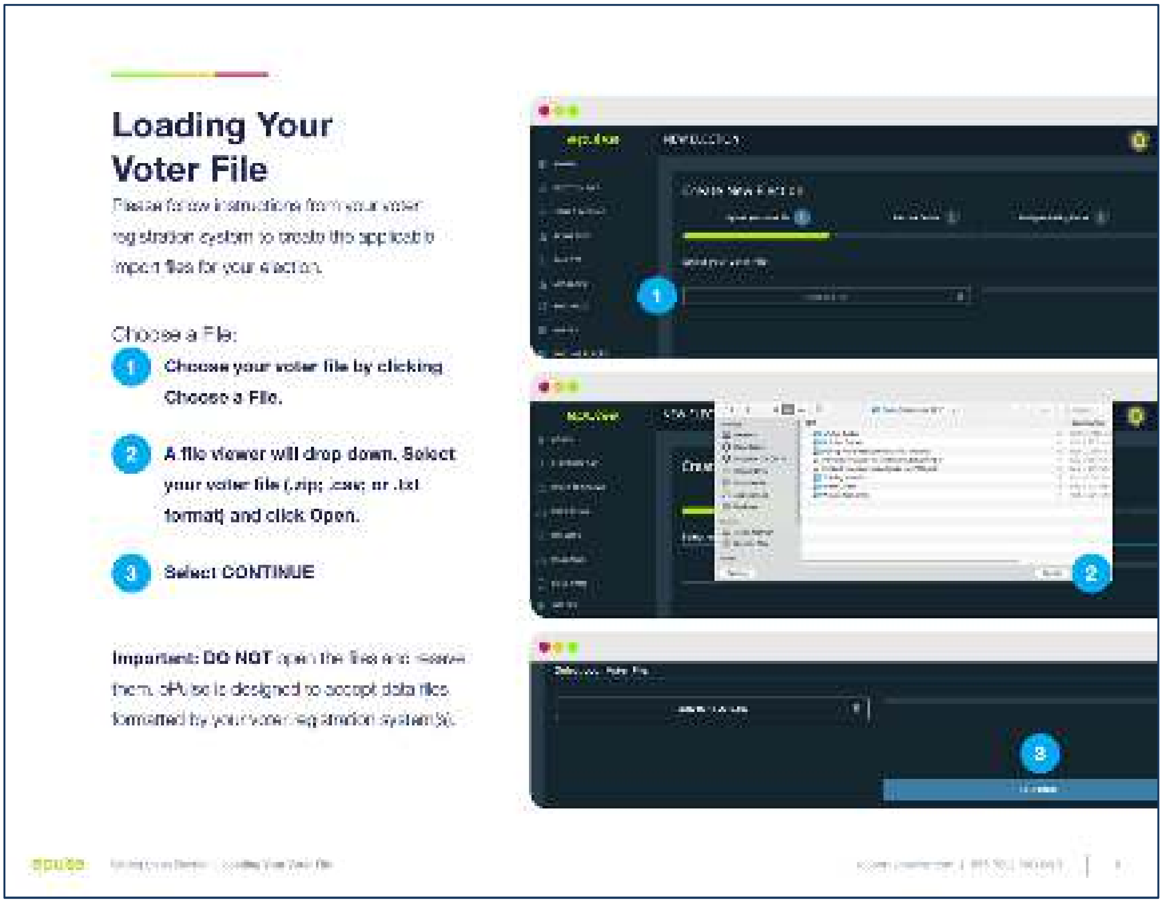




Creating an Election

From the Election Day Page, utilize the left hand menu.

1. Select ELECTION SETUP
2. Select ELECTIONS
3. Select CREATE ELECTION



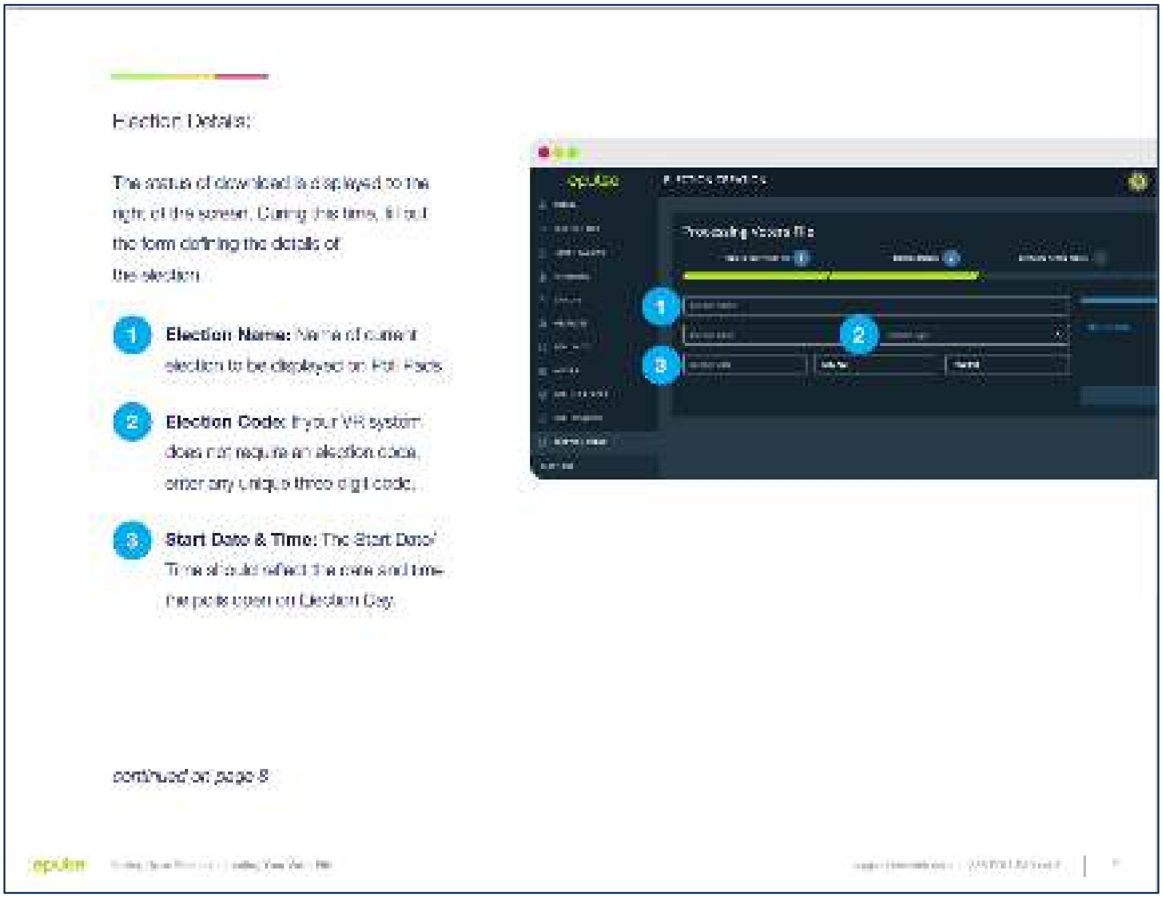
Loading Your Voter File

Please follow instructions from your voter registration system to create the applicable import files for your election.

Choose a File:

1. **Choose your voter file by clicking Choose a File.**
2. **A file viewer will drop down. Select your voter file (.zip; .csv; or .txt format) and click Open.**
3. **Select CONTINUE**

Important: DO NOT open the files and resave them. ePulse is designed to accept data files formatted by your voter registration system(s).



Election Details:

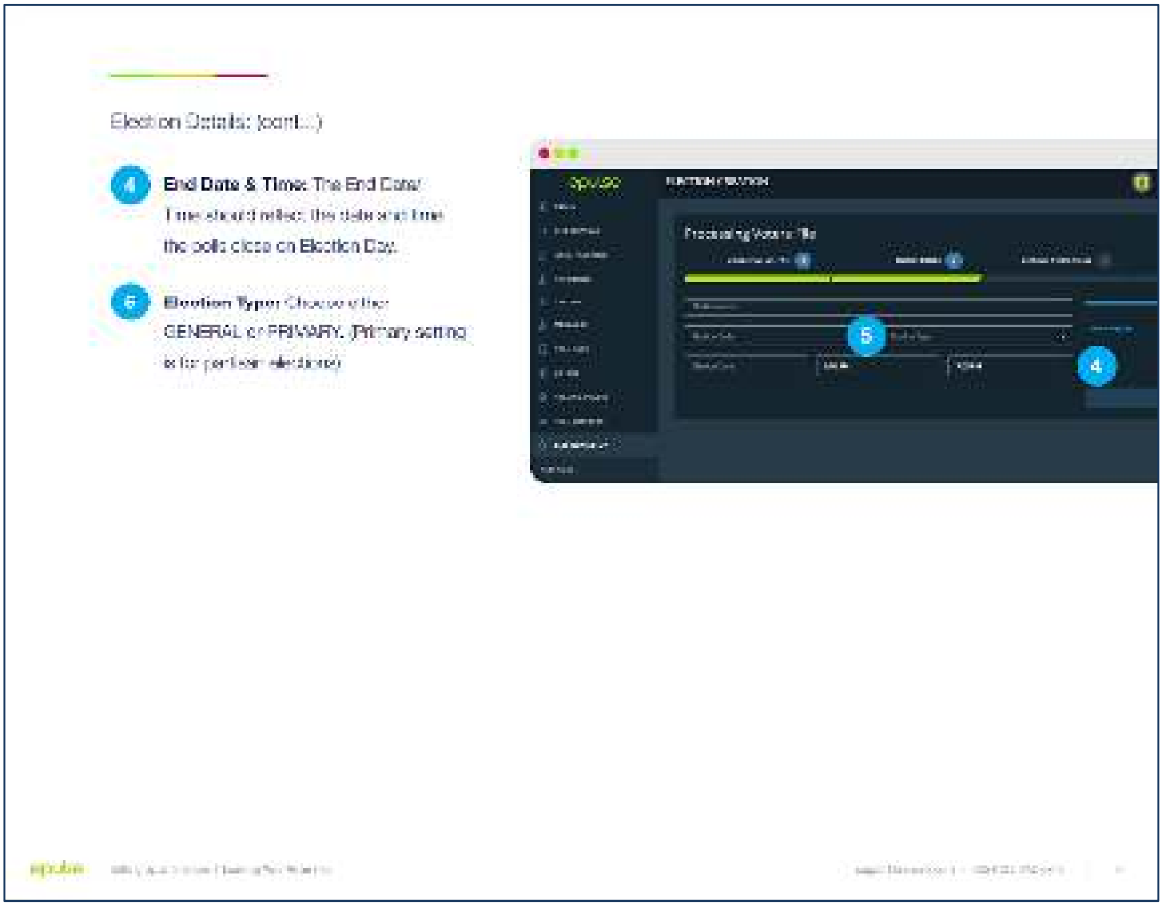
The status of download is displayed to the right of the screen. During this time, fill out the form defining the details of the election.

① **Election Name:** Name of current election to be displayed on Poll Pads.

② **Election Code:** If your VR system does not require an election code, enter any unique three digit code.

③ **Start Date & Time:** The Start Date/Time should reflect the date and time the polls open on Election Day.

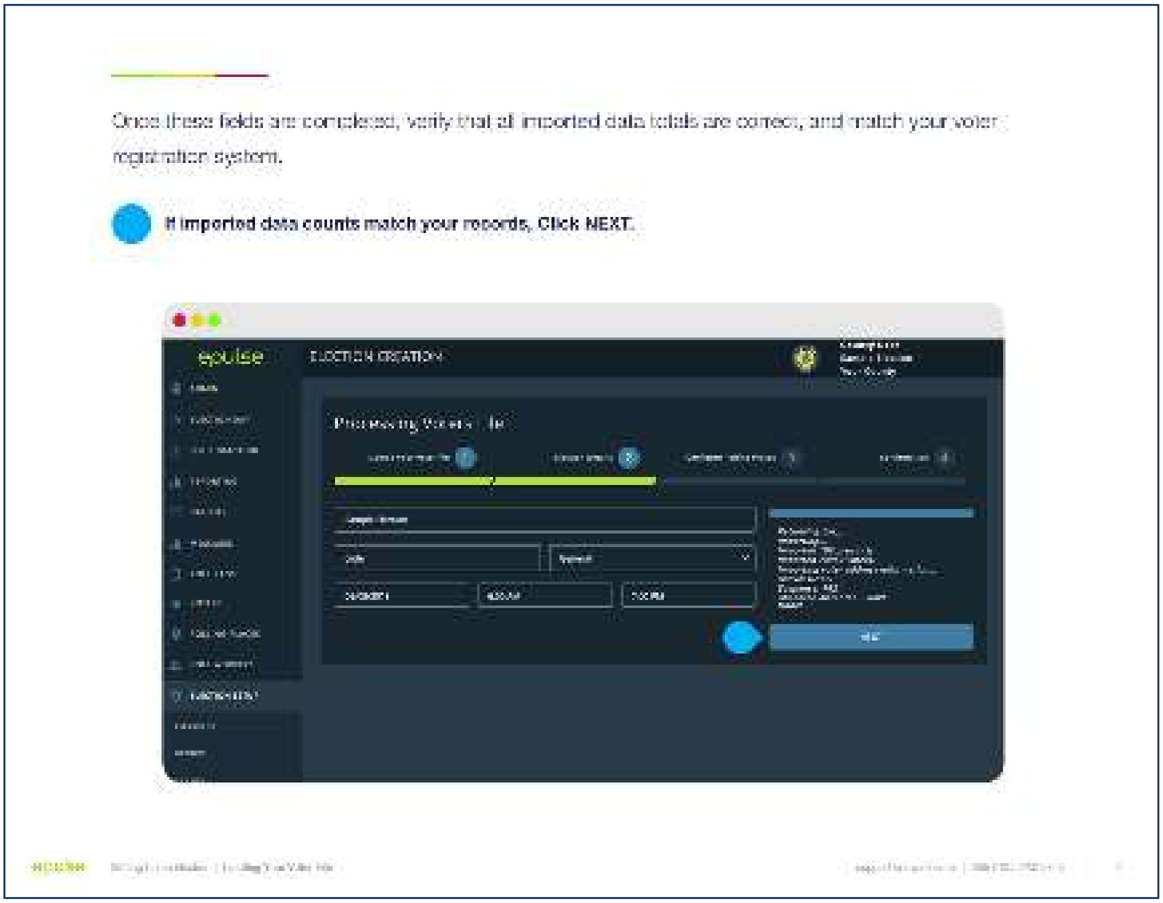
continued on page 8



Election Details: (cont...)

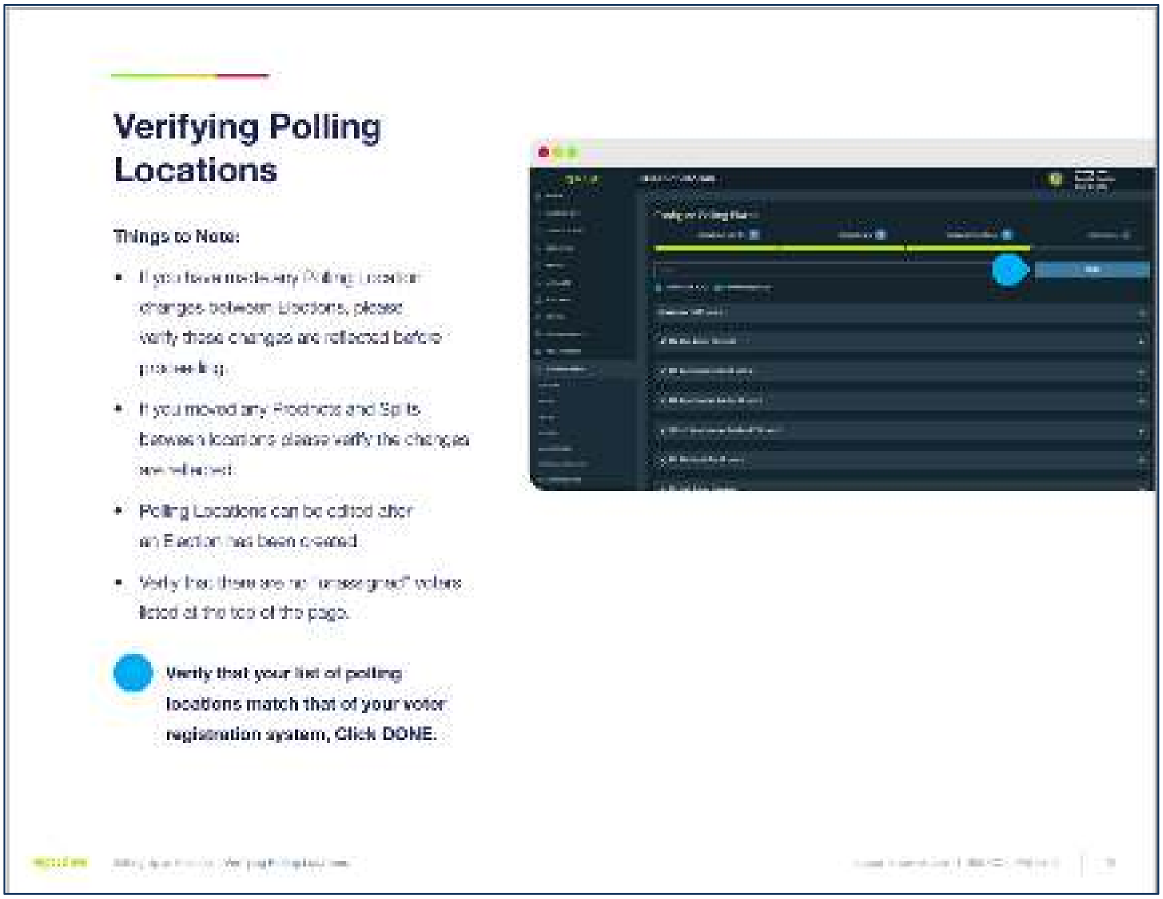
4 **End Date & Time:** The End Date/Time should reflect the date and time the polls close on Election Day.

5 **Election Type:** Choose either GENERAL or PRIMARY. (Primary setting is for partisan elections)



Once these fields are completed, verify that all imported data totals are correct, and match your voter registration system.

If imported data counts match your records, Click NEXT.

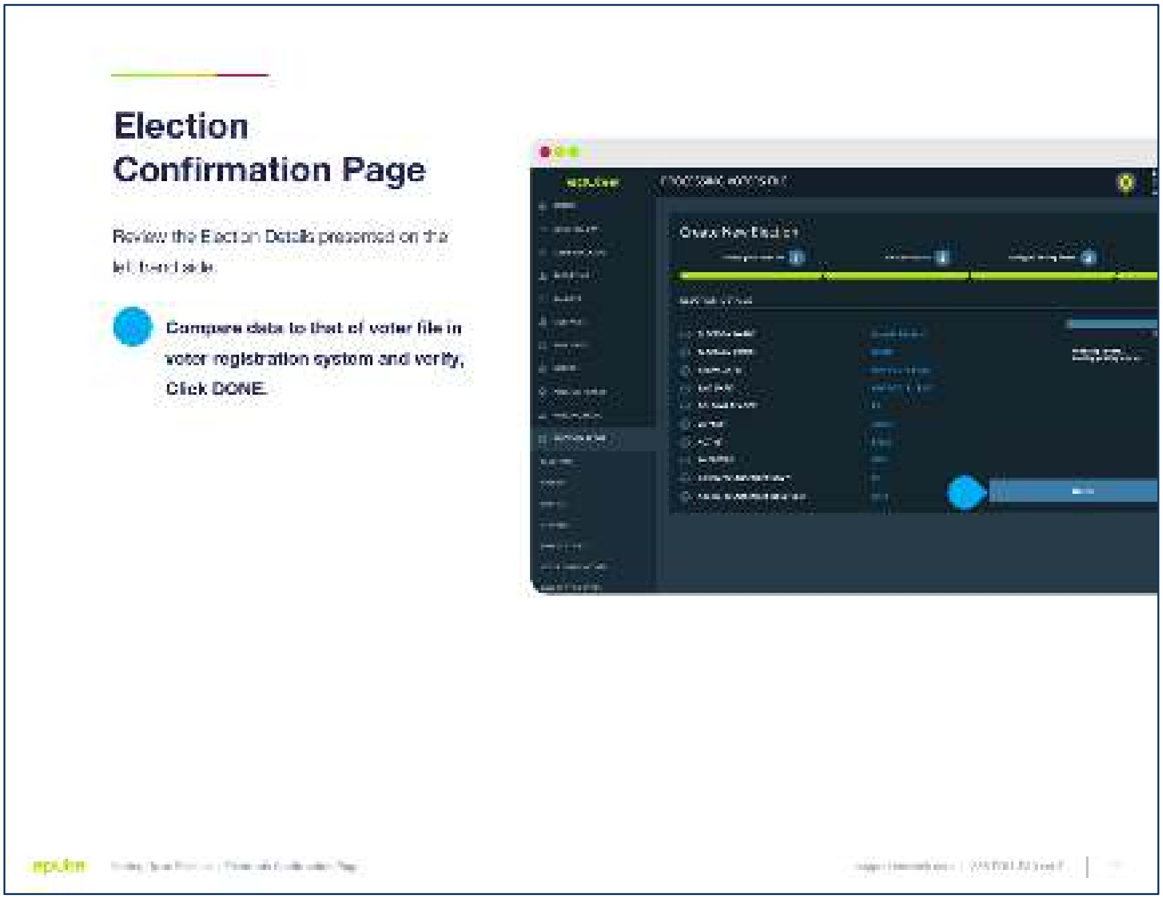


Verifying Polling Locations

Things to Note:

- If you have made any Polling Location changes between Elections, please verify those changes are reflected before proceeding.
- If you moved any Precincts and Splits between locations please verify the changes are reflected.
- Polling Locations can be edited after an Election has been created.
- Verify that there are no "unassigned" voters listed at the top of the page.

Verify that your list of polling locations match that of your voter registration system, Click DONE.



Election Confirmation Page

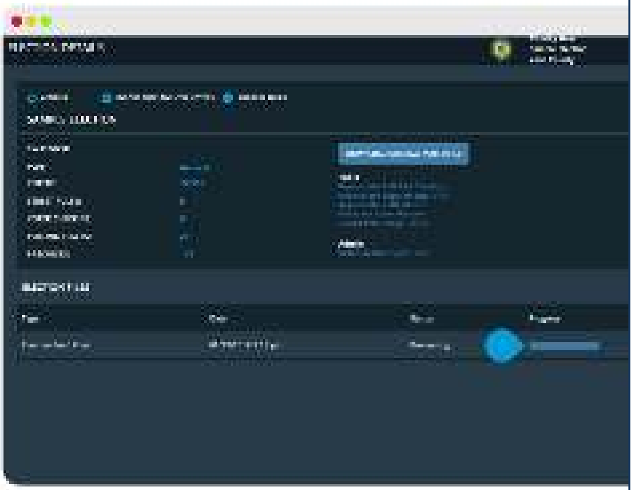
Review the Election Details presented on the left hand side.

Compare data to that of voter file in voter registration system and verify. Click DONE.

ePulse will create the voter database used for your election.

When finished ePulse will automatically redirect to the **ELECTION DETAILS** page.

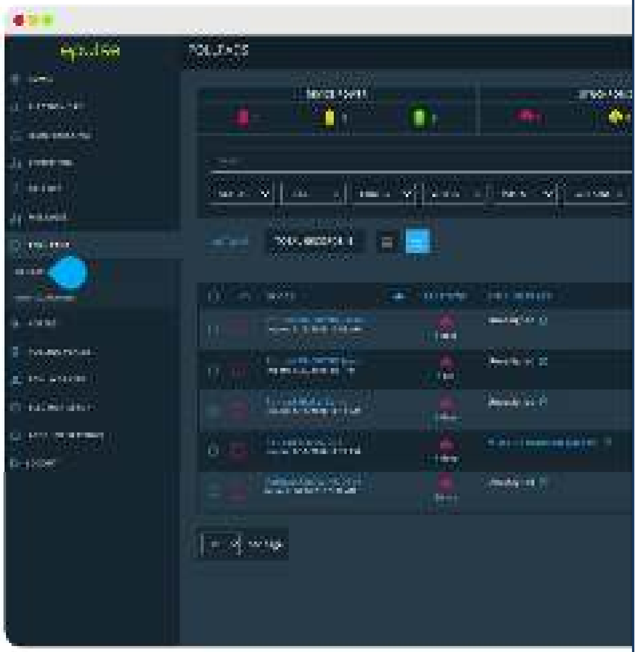
Progress may be monitored on the right hand side of the screen.



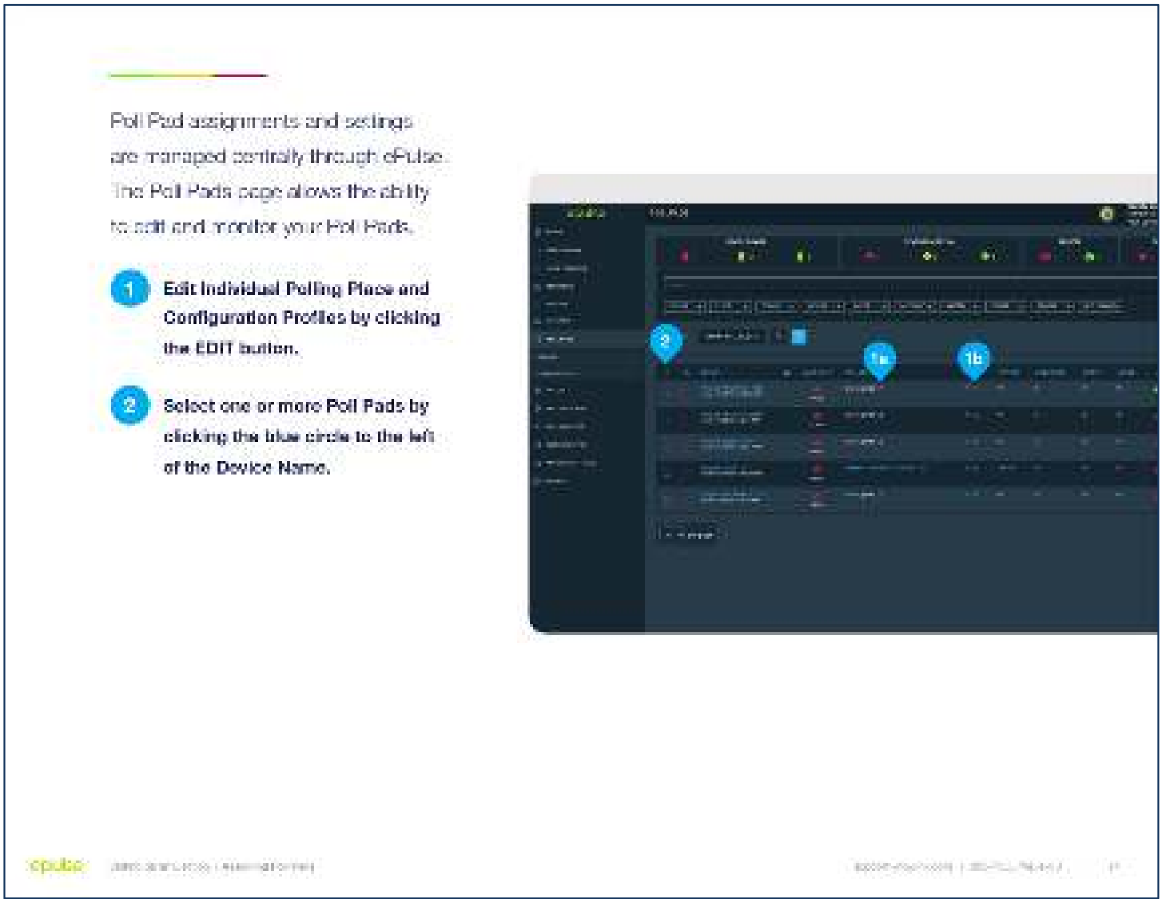
Assigning Poll Pads

Polling Assignments and Configurations do NOT reset between Elections.

Using the left hand menu, navigate to the **POLL PADS** tab, then select **MANAGE**. The screen will then populate with the Poll Pads page.

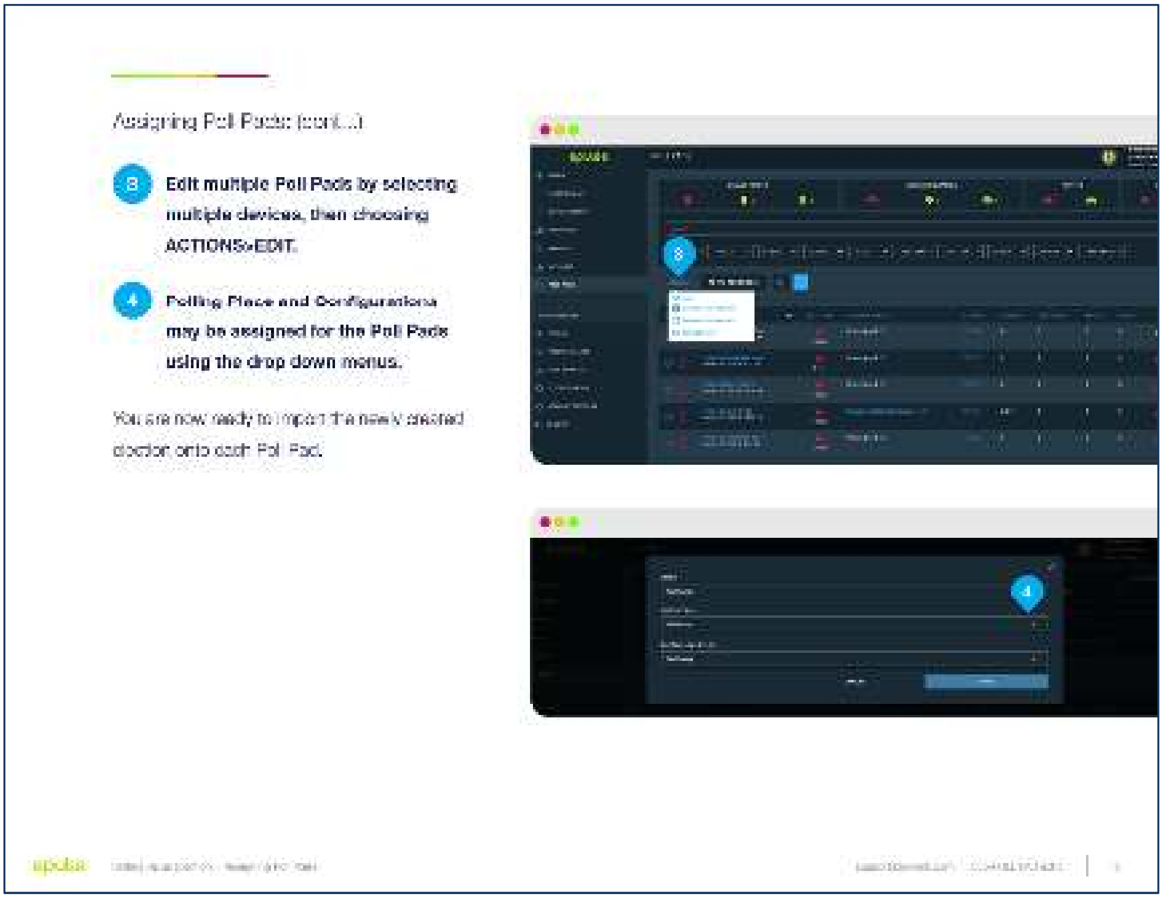


epulse



Poll Pad assignments and settings are managed centrally through ePulse. The Poll Pads page allows the ability to edit and monitor your Poll Pads.

1. **Edit Individual Polling Place and Configuration Profiles by clicking the EDIT button.**
2. **Select one or more Poll Pads by clicking the blue circle to the left of the Device Name.**



Assigning Poll Pads (cont...)

3 **Edit multiple Poll Pads by selecting multiple devices, then choosing ACTIONS>EDIT.**

4 **Polling Place and Configurations may be assigned for the Poll Pads using the drop down menus.**

You are now ready to import the newly created election onto each Poll Pad.

Section 7 – Electronic Poll Book (EPoll)

File 7-3 EPoll Validation

7.3 Describe any software/firmware validation tools built into the device for use in installation, pre-election, and post-election testing to verify that software/firmware has not been modified.

The Poll Pad has built-in software and firmware validation tools that enable the device to verify that it has not been modified and demonstrate this via comprehensive audit logs that timestamp and display every single event or interaction on the device. The application is code signed using our Apple enterprise development license and will not run on any device if it has been modified in any way. For more info, please see the "App code signing" section in the Apple iOS 12 Security paper attached to section 7-4.

Firmware tools inherent to the iPad include “sandboxed” applications which prevent applications from interacting with one another or accessing another application’s data. Data encryption on the device is certified FIPS 140-2. Additionally, the iPad and the Poll Pad application prevent unauthorized access from removable drives or any other physical medium. The device and application require an Apple developer signature to connect, which the iSync drives have to interact.

Amazon Web Services (AWS) GovCloud provides a network audit log of all threats and activity, including unauthorized access attempts using AWS Cloudwatch. This means that any unauthorized attempts to interact with ePulse EPDMS will be provided in a printable, exportable audit log.

Meraki Mobile Device Manager does not require a cloud network to enroll devices and maintain logs. Software updates or other modifications can be pushed out until after the close of an election. Similarly, if a device is stolen, it can be locked and disabled to prevent data from being accessed or modified.

Clarification Question

A. Does the capability exist to validate the Epoll software/firm using hash validation?

No, the ePulse/Poll pad solution does not use or make Hash Validation available. iOS platforms instead use Code Signing. Whereas Hash Validation simply validates that the file size has not changed, Code Signing uses Hash Verification inside its security procedures and also verifies against ANY file modification, and will stop the application from functioning should any change be detected.

B. If yes, what are the steps needed to obtain a HASH value in the following scenarios? Please specify:

- Initial Acceptance Testing,
- County Warehouse Pre-Election,
- Polling Place Setup, and
- Post Election review (saved as archived documentation).

With the utilization of Code Signing, the need for a front facing easily accessible Hash value is not as prevalent, so in the current configuration of the Poll Pad Solution it is not available. If this is a need, then it can be disseminated upon request.

More information on code signing if available from Apple here:
https://developer.apple.com/support/code-signing/

Section 7 – Electronic Poll Book (EPoll)

File 7-4 EPoll Ease of Use

7.4 Ease of Use for the Election Official: Provide and demonstrate customer experiences via referrals and specific case studies or white papers including access, special features, and any other customer feedback.

KNOWiNK was the first to develop a voter check-in application on the iPad. We specifically selected the iPad for development of the Poll Pad application due to its user-friendly design. Apple has gone to great lengths to ensure that the device was intuitive and easy to use for people of all ages. When providing our initial training sessions, we frequently experience poll workers having familiarity with the device since they use it themselves or with grandchildren.

iPad is an industry leader in accessibility, giving the user the ability to zoom in on text and ability to enter high contrast mode, voiceover, zoom, magnifier, and several other features to aid users who require assistance. The iPad solution includes the iOS touch keyboard and has capabilities to perform voter check-in functions with ADA compliance without the need of any additional hardware.

The Poll Pad has significantly cut line lengths, average check-in times and costs to jurisdictions all over the United States. Customer experiences often include reducing the average voter check-in time to 30-35 seconds on average. Our patented scanning tray included in every Poll Pad solution puts the ID PDF417 barcode at the optimal distance from the built-in iPad camera to scan and automatically retrieve voter data. The Poll Pad also has an intuitive manual search function that requires the first three letters of the voter's first and last name to quickly get to the correct voter data.

Our clients, poll workers and voters alike enjoy how the Poll Pad makes voter check-in and the bustle of election day a breeze. We have included in the following pages customer referrals, case studies, white papers, certification documents, special features and client quotes.

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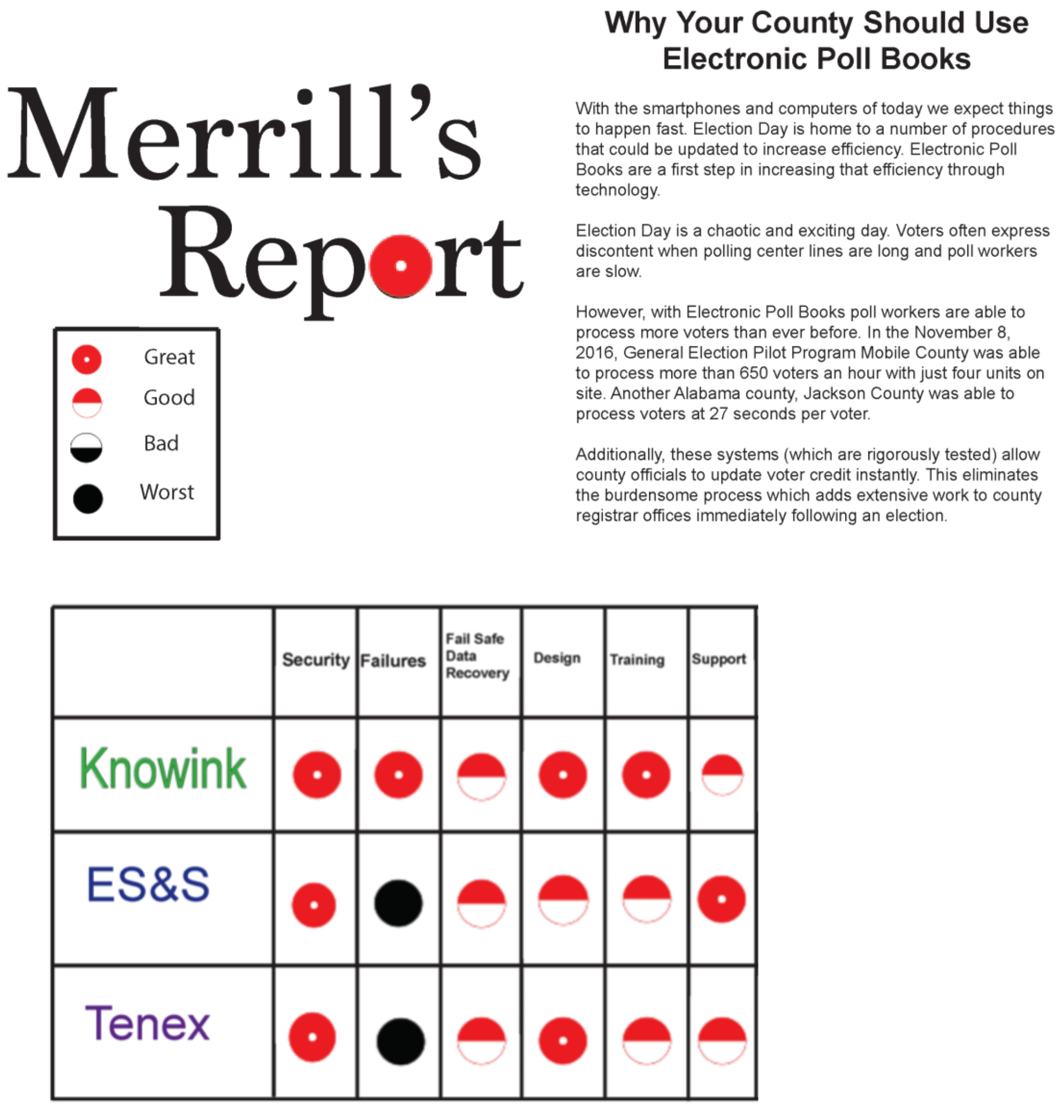


Merrill's Report

◉	Great
◓	Good
◒	Bad
●	Worst

Why Your County Should Use Electronic Poll Books

With the smartphones and computers of today we expect things to happen fast. Election Day is home to a number of procedures that could be updated to increase efficiency. Electronic Poll Books are a first step in increasing that efficiency through technology.

Election Day is a chaotic and exciting day. Voters often express discontent when polling center lines are long and poll workers are slow.

However, with Electronic Poll Books poll workers are able to process more voters than ever before. In the November 8, 2016, General Election Pilot Program Mobile County was able to process more than 650 voters an hour with just four units on site. Another Alabama county, Jackson County was able to process voters at 27 seconds per voter.

Additionally, these systems (which are rigorously tested) allow county officials to update voter credit instantly. This eliminates the burdensome process which adds extensive work to county registrar offices immediately following an election.

	Security	Failures	Fail Safe Data Recovery	Design	Training	Support
Knowink	◉	◉	◓	◉	◉	◓
ES&S	◉	●	◓	◓	◓	◉
Tenex	◉	●	◓	◉	◓	◓

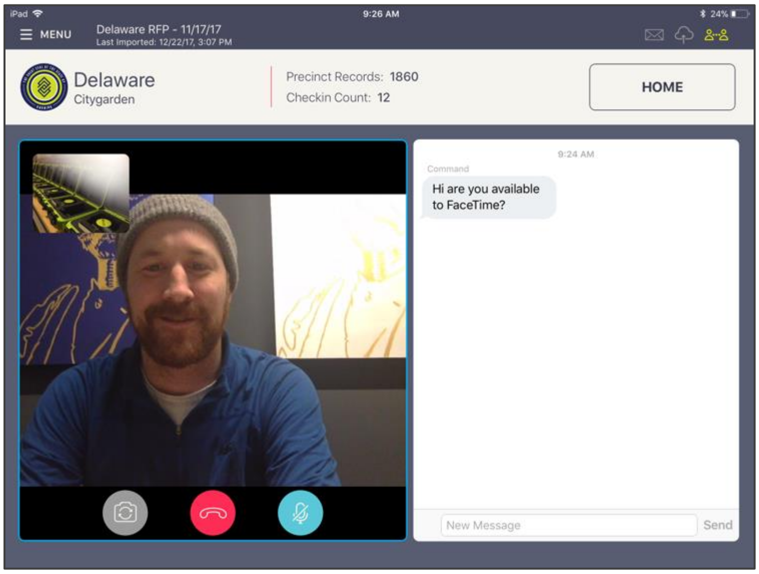
John Merrill's report with conclusions from research of EPoll book solutions.

We have attached a document with white papers, security reports, and security certifications on the Poll Pad, Apple iOS, and AWS components of our solution in Section 21-3 Security Assess.

Access and Special Features

The County offices throughout the State may communicate with Poll Pads via text and video message. This includes the ability for technicians to communicate directly with poll workers to help resolve issues and see what they are experiencing in real time. ePulse provides election authorities with a powerful and complete communications tool between polling places and the County office. Customizable and pre-written messages can be sent between the Poll Pads and ePulse to communicate questions and answers. KNOWiNK's innovative video chat is embedded directly into the Poll Pad application and is an election industry first. It revolutionizes how poll workers communicate issues to the election authority by giving them a first-hand look at the polling place.

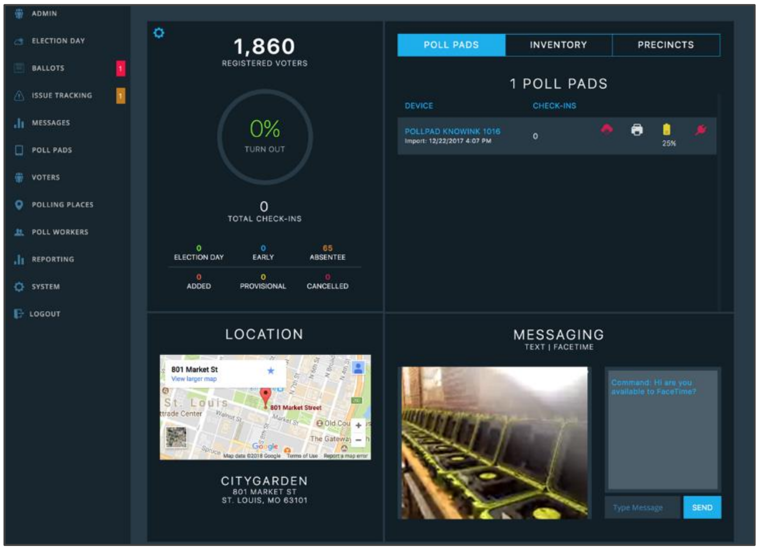
Resolve issues in a polling place with ePulse's Video and Text Messaging capabilities.



Delaware RFP - 11/17/17
Last Imported: 12/22/17, 3:07 PM

Precinct Records: 1860
Checkin Count: 12

9:24 AM
Command
Hi are you available to FaceTime?



1,860
REGISTERED VOTERS

0%
TURN OUT

0
TOTAL CHECK-INS

0 ELECTION DAY	0 EARLY	65 ABSENTEE
0 ADDED	0 PROVISIONAL	0 CANCELLED

1 POLL PADS

DEVICE	CHECK-INS	
POLLPAD KNOWINK 1016 Import: 12/22/2017 4:07 PM	0	25%

CITYGARDEN
801 MARKET ST
ST. LOUIS, MO 63101

Command: Hi are you available to FaceTime?

Access and Special Features (Continued)

The application has features to accommodate and assist voters with disabilities. The Poll Pad is compliant with all federal laws regarding ADA and complies with all common language accessibility laws and guidelines in the United States. Poll Pad was designed to give the user an accessible experience, and the user interface was constructed to allow this. Several attributes were taken into account when building the application, such as contrast, type color, font point size, font family, font heaviness, spacing, and clean design.

Clarification Question

How long does the equipment last? Will the equipment be available for the life of the contract? How will the proposed EPOLL assists Election Official in preparing 159 individual databases within 25 business days, where the county has a local race and a statewide race?

The iPads may require a refresh in years seven or eight but may last for the 10-year contract term. We recommend the refresh in year seven or eight because, after several years, Apple has historically stopped updating the iOS on the older iPad models which may affect KNOWiNK's ability to update the Poll Pad application to use new features.

Poll Pad is designed to make it very simple for the local election authority to download data to each EPB device. Data can be imported wirelessly over the air via a secure, encrypted connection to ePulse to download voter data and election specific settings. This happens by accessing the password protected tools and settings menu in the application, and then selecting the "Import Voter File" button which starts a process that connects Poll Pad to ePulse and transfers the data. This connection happens over a local wireless network in the local election office. KNOWiNK has completed several near statewide deployments and worked directly with hundreds of both small and large election jurisdictions to streamline this process and make it quick and easy to complete in a minimal amount of time. Many jurisdictions can import the data on hundreds of Poll Pads in less than a day's time.

The Poll Pad solution is designed to be simple to use and an effective solution. Built with knowledge that Election Officials around the globe will have varying degrees of technological experience, ePulse is able to parse the data presented from the voter registration system seamlessly. This allows for ease of use when building 1 or 159 different databases. Additionally, the system is designed to handle multiple concurrent elections such as a state and local race. There are two avenues to accomplish this:

1. If there are two separate ballots, and two separate elections running at the same time, then the Multi-Election feature will allow the User to switch between both elections without affecting data on either election.
2. If there are two separate elections with a singular ballot, then the Parser will map the Ballot styles based on whichever determining factors are present i.e. Precinct/District/Split to ensure the voter gets the correct ballot.

Section 9 – Training and Support – State Level

File 9-1 GASOS Train EMS

9.1 Provide an extensive, in-depth training plan and documentation for GASOS staff on the setup and use of the proposed EMS in creating and configuring election databases for use in Georgia elections and primaries.

We will provide the GASOS staff Election Management System (EMS) training focused on creating election databases in Election Event Designer (EED) in addition to the training provided for the counties focused on downloading data to the voting devices and uploading and reporting election night unofficial results. GASOS EMS training is scheduled for 10 days specifically designed for teaching the GASOS programmers how to program election databases for all counties. Additional training will be provided to GASOS on all county-based equipment and software modules. This training will be in advance of any county training. Our intent is to train the counties utilizing the regional organization structure already in place. The format for training GASOS on county level responsibilities will be in a train the trainer approach to enable the state to conduct future county level classes as required.

We have scheduled training at the State offices to take place prior to any regional county-level training. State level training while similar to training held regionally for the counties will emphasize specific state level functions. This includes Election Management Systems Election Event Designer training in which we will train the state on creating and programming the county databases. Additionally, we will conduct training classes for the state in all county level training(s) emphasizing more of a train the trainer approach. Scheduling the state training prior to the regional county training enables the state to play a vital key role in customization of the county level training, this also allows for standardization throughout the state.

Documentation
Dominion offers a library of documentation specific to individual roles and situations. Acceptance Check Lists, Unit Tracking Procedures, and Troubleshooting Guides are examples of items used in Preventative Maintenance and Hardware Acceptance Training. User Guides and Quick Reference Guides are examples of items used in Election Poll Worker Training. User Guides are comprehensive textual documents, covering all facets of a topic such as Vote Tabulators and Accessible Components. Quick Reference Guides

are brief, focused and image-oriented; they are designed for reference-at-a-glance in practical election situations.

Dominion will work with the State to create and customize training materials that are applicable to the State and Counties. Provided below are sample training materials in the form of links to training videos and sample training documents. Additional training material is provided in response to question 18-6 Train Sample.

VIDEO LINKS

o Election Event Designer – User Procedures: https://youtu.be/0cB9XBWfHqE

o ImageCast Central – User Procedures: https://youtu.be/3ENHzmFdMHU

o ImageCast Voter Activation – User Procedures: https://youtu.be/rhtIzWdR-do

o Results Tally & Reporting – Election Night Reports: https://youtu.be/QIlRBuaungM

o Results Transfer Manager – User Procedures: https://youtu.be/W2BjQMcaGuY

o Results Tally & Reporting – User Procedures: https://youtu.be/ghL5rBrygpA

o ImageCast X - https://www.youtube.com/playlist?list=PLsiDPMsLSeoDf3IgQnJX5oT-MecOochnH

Clarification Question

Per the Questions and Answers Suppliers were requested to provide a high level in depth training plan and documentation for GASOS staff on the setup and use of the proposed EMS in creating and configuring election databases for use in Georgia elections and primaries. In reference to: Section I. Implementation Plan of the Background and Scope of Work:

Phase 1 will be the full inventory distribution and necessary training of up to ten (10) counties selected by GASOS to participate in a pilot project to be executed in November 2019. The pilot equipment will be used in any associated November 2019 election scheduled for the selected counties.

Phase 2 will be broken into two parts. Phase 2 – Part 1 will be distributing a minimum of five (5) BMD, two (2) PPS, and one (1) EMS computer to each county (159). These components will facilitate election official and poll worker training activities. Phase 2 – Part 2 will be the full distribution of all equipment to the counties including training. Phase 2 – Parts 1 and 2 will begin after the distribution of equipment to the counties participating in the scheduled pilot project in November 2019.

Completion of Phase 2 – Part 1 will be completed by end of the fourth quarter of 2019 (December 31, 2019). Completion of Phase 2 – Part 2 will be completed prior to the end of the first quarter of 2020 (March 31, 2020).

Georgia Implementation Training Plan

The following is an in-depth training plan as requested and is submitted with the understanding that training dates and training content are subject to change pending award of the contract and the outcome of collaboration with the GASOS/County Election Officials.

Pre-Training Tasks

2 Days: 7/16 to 7/17 - Meeting with GASOS and GASOS-selected County Election Officials to customize training documentation, syllibi, demonstration project and ballots to reflect GA election procedures and terminology.

18 Days: 7/15 to 8/1 - Customized training documentation, syllibi, demonstration project and ballot development.

8 Days: 8/2 to 8/9 - GASOS review and approval of final training documentation, syllibi, demonstration project and ballot and set/confirm the training schedule.

Phase 1 Training Plan

GASOS – 8/12 to 8/23 – 10 Days

- Election Programming – 4 1/2 Days
- DSuite Administrator and User – 2 Days
- ICX-BMD/ICP Operator – 1 Day
- ICC/ADJ Administration – 1 Day
- ICC/ADJ Operator – ½ Day
- UOCAVA – 1 Day

Counties – Administrative/User – 8/26 to 9/9 – 2 Regional Trainings - 4 Days Each

- DSuite Administrator and User – 2 Days
- ICC/ADJ Administration – 1 Day
- UOCAVA – 1 Day

Counties – Operator/Pollworker – 9/10 to 9/13 – 2 Regional Trainings - 2 Days Each

- ICX-BMD/ICP Operator – 1 Day
- ICC/ADJ Operator – ½ Day
- Pollworker Train the Trainer – ½ Day

Phase 2 Training Plan

Counties not holding December Runoff Election

Counties – Administrative/User – 11/11 to 12/13 – Regional Trainings - 4 Days Each

- DSuite Administrator and User – 2 Days
- ICC/ADJ Administration – 1 Day
- UOCAVA – 1 Day

Counties – Operator/Pollworker – 11/11 to 12/13 – Regional Trainings - 2 Days Each

- ICX-BMD/ICP Operator – 1 Day
- ICC/ADJ Operator – ½ Day
- Pollworker Train the Trainer – ½ Day

Counties holding December Runoff Election

Counties – Administrative/User – 12/9/2019 to 1/17/2020 – Regional Trainings - 4 Days Each

- DSuite Administrator and User – 2 Days
- ICC/ADJ Administration – 1 Day
- UOCAVA – 1 Day

Counties – Operator/Pollworker – 12/9/2019 to 1/17/2020 – Regional Trainings - 2 Days Each

- ICX-BMD/ICP Operator – 1 Day
- ICC/ADJ Operator – ½ Day
- Pollworker Train the Trainer – ½ Day

Courses

DSuite Election Programming – 5 Days

- Democracy Suite Election Programming Software Overview
- Template (Master) Election Project Concepts
- Election Programming Phases
- Introduction to Election Event Designer
- Working with Election Projects – Manual Project Build
- Election Project Definition – Primary and General Elections
- Divisioning – Districts, Precincts, and Elector and Ballot Groups
- Election Event – Contests and Candidates
- Localization – Language Management
- User Management
- Advancing to Election Project Styling
- Ballot Styling and Templates
- Translations – Single and Multiple Language
- Creating the Ballots and Audio Ballot Files
- Previewing Audio Ballot Files
- Creating Electronic Ballot Headers
- Tabulation Setup
- Preparing Proofing Packages
- Create Election (Tabulator) Files
- Create Final Project Backup for Transfer to County
- Advanced Functions – Creating Template (Master) Projects and Using Election Data Translator for Import/Export of Election Definition Data

<u>**DSuite Administrator and User – 2 ½ Days**</u>

- Introduction to Democracy Suite
  - Democracy Suite Software Component Overview
  - Tabulator Systems Overview
    - ImageCast Precinct Ballot Scanner – ICP
    - ImageCast X-Ballot Marking Device – ICX-BMD
    - ImageCast Central – ICC
  - Review of Quick Reference Guides
  - Additional System Components
  - Consumable Items
  - Voting System Process Overview
  - Generic Election Timeline and Workflow Responsibilities Review
- The Election Proofing Process
  - Overview of the County Proofing Process
  - The Election Proofing Package
  - Proofing Ballots
  - Proofing Reports
  - Proofing Audio Ballot Files
- Election Preparation
  - Election Event Designer – EED – Programming the Tabulators
  - Setting Up ImageCast Central – ICC
  - Setting Up Adjudication
- Logic and Accuracy Testing
  - Testing Steps Overview
  - Test Deck Overview
  - Logic and Accuracy Test Procedures
    - ICX-BMD/ICP
    - ICC with Adjudication
    - RTR
- Results Talley and Reporting - RTR
  - Overview of RTR
  - Opening an Election in RTR
  - RTR Settings
  - Loading Election Results
  - Managing Results Files and Tabulators in RTR
  - Manual Entry of Results
  - Results Reporting and Exporting
  - Exporting Results Manually
- Backing up the Final Results
- Purging Test Results

ICC/ADJ Administration – 1 Day

- Overview of ICC and ADJ Functionality
- Setting Up the ICC – Loading the Tabulator Files and Scanner Configuration
- Setting Up RTR to Manage, Monitor and Automatically Upload Results From ICC/ADJ
- Setting Up Adjudication – Loading the Election and Setting Conditions
- Logic and Accuracy Testing
- Ballot Handling
    - Scanning Ballots and Common problems
    - Batch Handling
        - Rejecting and Resetting batches
        - Deleting Batches
- Adjudicating Ballots
    - Standard User Vs. Administrative User
    - Ballot Overlays
    - Ballot Review and AuditMark
    - Write-in Resolution
    - Submitting Batches
    - Managing Quarantined Ballots
    - Configuring and Managing Report Profiles

UOCAVA – 1 Day

- Configuring UOCAVA
    - Display
    - Language Management
    - Voter ID and PIN Options
- Tabulator Management
    - Importing Election Files
    - Configuring Parameters
- Download Administration
    - Editing the Ballot Package
    - Cover Sheet, Affidavit, and Return Envelope Settings
    - Security Question Administration
- User Management
- Customization
    - Logos
    - Color Schemes
- Voter List Management
- Accessibility
- Testing

- Reporting

ICX-BMD/ICP Operator – 1 Day

- ICP Operations
  - Hardware Overview
  - Loading/Changing Paper Tape
  - Loading the Memory Cards
  - Acceptance Testing
  - Maintenance and Troubleshooting
- ICX-BMD Operations
  - Hardware Overview
  - Loading Paper and Toner in the BMD Printer
  - Loading Election Files
  - Acceptance Testing
  - Maintenance and Troubleshooting
- Logic and Accuracy Testing
  - Test Decks and Vote Sims
- Voting Equipment in the Polling Place
  - Setting up the Equipment
  - Opening the Polls
  - Activating Voter Cards
  - Voting on the ICX-BMD/ICP
  - Closing the polling place

ICC/ADJ Operator – ½ Day

- Ballot Handling
  - Scanning Ballots and Common problems
  - Batch Handling
    - Rejecting, Resetting, and Deleting Batches
- Adjudicating Ballots
  - Ballot Overlays
  - Ballot Review and AuditMark
  - Write-in Resolution
  - Quarantining Ballots

Pollworker Train the Trainer – ½ Day

- Training Techniques
- Learning Styles
- Presentation Skills
- Voting Equipment in the Polling Place
  - Setting up the Equipment
  - Opening the Polls
  - Activating Voter Cards
  - Voting on the ICX-BMD/ICP
  - Troubleshooting

- Closing the Polls

Section 9 – Training and Support – State Level

File 9-2 GASOS Train Equip

9.2 Provide an extensive, in-depth training plan and documentation for GASOS staff on the setup and use of the proposed PPS, CSD, and BMD.

In addition to the county-level training we will also provide the GASOS staff additional equipment and setup training, which focuses on all hardware and operational procedures, as well as, polling place set-up, closing and use procedures. Additionally, we will train the state in the county specific training with a train the trainer approach to enable the state to conduct future county level classes regarding equipment and use procedures, as required.

This equipment and use procedure training for the State will take place prior to any regional county level training. State level training while similar to training held regionally for the counties will emphasize specific state level functions regarding equipment and use and emphasizing more of a train the trainer approach. Scheduling the state training prior to the regional county training enables the state to play a vital key role in customization of the county level training, this also allows for standardization throughout the state.

Since the state level training will help customize the County level training, many of the same practices will be utilized to as a starting point and then customized based on feedback from the state. This best-practices approach will include:

Dominion Training Focus and Approach

During the State level training phase, our focus will be on providing State Administrators with the necessary knowledge to implement a voting system that will smoothly and efficiently process voters to understand the process and enable them to pass along the information at a regional level. We accomplish this through training customization, utilizing various training formats, implementing adult learning principles, and proper pacing within our courses.

Training customization will include how to tailor the information to meet jurisdiction's needs. Courses cover both hardware and software, and they detail all phases of the election. One aspect of the customization is utilizing different formats when creating training, including instructor led classes in person, instructor led classes online, and self-paced online eLearning.

In all training formats, we base our training on the main principles of adult learning. Adults learn best when material is presented in a variety of ways. To this end, our trainers utilize auditory, visual, and hands-on training techniques. Our classes follow the "Explain, Demonstrate, Do" method. Students hear an explanation of their responsibilities, see it demonstrated, and then have a chance to practice it themselves. For example, our online eLearning presents case studies and step-by-step simulations to enable learners to experience the hardware or software virtually without having to unpack a voting unit.

In order to maximize retention, training classes must be properly divided and paced. In our case, poor retention means an unsuccessful election, which is unacceptable. Our training materials are divided into small, manageable pieces that enable our instructors to cover information without exhausting a student's attention span. Each section of our training lasts no longer than ninety minutes, and then a student's knowledge is thoroughly checked through hands on exercises and progress checks.

Dominion Voting understands that training must support the State and individual county election process. We work in conjunction with the State's election staff to define custom training curriculums, so they fit into the respective county's normal election practices and processes.

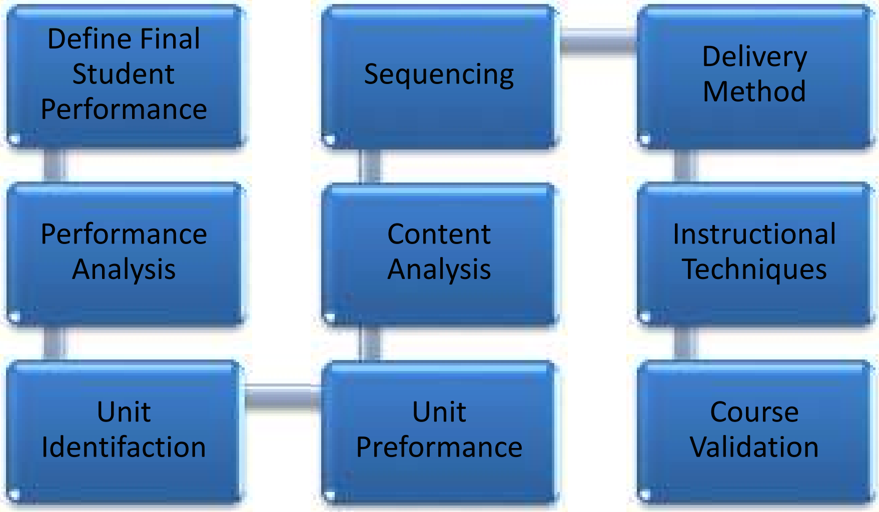
We will also work with Georgia to create custom training materials that all parties deem necessary. Any source files or camera-ready images will be available to be given to Georgia as needed.

Regional Training Approach

Dominion Voting recognizes the value of implementing a training program centered around statewide consistency and standardization of processes and procedures. Dominion Voting will work with the GASOS to understand and incorporate required and/or recommended procedures and course material into all training deliverables and make sure all trainings and training materials meet the needs of the GASOS and its counties. Prior to delivering any end-user training, Dominion Voting will customize all materials with GASOS input. Dominion Voting will host workshops at the GASOS facility or an agreed upon location and bring together the necessary resources from both the State and Dominion Voting to make sure all training materials meet the needs of all stakeholders. Thereafter, Dominion Voting will work with the GASOS to set up regional training sessions in the 14 designated state regions. Each regional site will host 2 or 3 training sessions, each designed for a targeted audience, depending on the course material to be delivered in each session. Dominion Voting recognizes the need for flexibility and will schedule additional training sessions for supplemental information to be delivered or to accommodate anyone or any county who may not have been able to attend initial training sessions if necessary. The online Self-paced e-learning modules will be available as refresher training for anyone needing such at any time.

Instructional Design

Just like the county level training approach, our instructional design at the State level will be a Nine Step Model. This model starts with defining what the final student performance is and what the goal of the course needs to be.



Once that final performance is defined for the State level courses, we consider performance analysis and identify "What is the least they need to learn?" Next, we determine Unit Identification and Unit level exercises, perform content analysis, define sequencing and delivery methods, and finally validate the course.

Conceptual Change Management Plan

Training/Change Management: The Implementation Team will be responsible for all Change Management, Operational Improvement and Training activities including the development of communication plans, organizational change management activities as well as the training required for staff and poll workers. The state-level focus will focus on enabling State elections administrators fully understand the activities that will be critical to ensuring that county level staff are transitioned from the old system to the new – that includes a review of existing functionality, procedures and processes and a documentation of new procedures and processes.

The Dominion Team will assist the GASOS in reviewing existing procedure manuals and the creation of new documentation sets to ensure that each county has the information that is required to support the system. If Change Management activities are not considered as part of the overall scope of the project – it will be difficult to initiate change and the user buy-in that is essential as part of this transition.

County & Poll worker Training / Change Management Workshop: These workshops will be designed to better understand the training requirements that will be needed to transfer knowledge of the system to designated County Staff and Poll workers. Information will be gathered to ascertain the most effective approach to provide training. Information such as the number of poll workers that will be required for successful Election Day support and the relative number of classes that will be required, are some of the items up for discussion. In addition, Change Management activities will also be discussed, such as how best to incorporate staff into the process (project newsletters, e-mail updates, etc.).

Critical to the success of a change management plan is an understanding of the current system. In addition to the initial project activity of completing an analysis of the existing system, Dominion's proposed project team includes people who were involved in the deployment of the current system. Not only will the analysis show what needs to be changed, but Dominion's team also has in depth expertise on the current Georgia system, making this process more efficient.

Training Curriculum

Dominion Voting offers the classes listed below. All classes include quick reference guides, training manuals, and technical reference manuals when necessary. Dominion Voting will work to customize Election Day training materials to suit Georgia's specific needs.

All instructors are employees of Dominion Voting and KNOWiNK.

Training Class Description	User Category	Number of Days/ Hours	Max Number of Students
D-Suite Election Management System Election Event Designer Training	GASOS	10 days	10
D-Suite Accumulation only EMS Training	GASOS, County Administrators, Division Users	2 days	10
D-Suite Results Tally and Reporting Training	GASOS, County Administrators, Division Users	1 day	10
D-Suite ICP Training	GASOS, County Administrators, Division Users	1 day	20 per class
D-Suite ICX Training	GASOS, County Administrator, Division User	1 day	10 per class
D-Suite ICC & Adjudication Training	GASOS, County Administrator, Division User	1 day	15- 20
D-Suite UOCAVA Training	GASOS, County Administrator, Division User	1 day	15-20
D-Suite Mobile Ballot Printing Training	GASOS, County Administrator, Division User	1 day	15 -20
Pollworker Train the Trainer	Poll Workers Trainers	2 days	6 per class
Election Day Rover Training	Election Day Rovers	½ day	20

Course Descriptions – Outline

Hardware operations training:

This course introduces the Dominion Voting hardware. Topics include:

- Setup of the Equipment
- Opening Polls
- Processing Ballots
- Accessible Voting
- Closing Polls
- Acceptance Testing
- Troubleshooting
- Performing L&A

Democracy Suite EMS Training:

This course conducted at the State level introduces election programming concepts in EMS. Topics include:

- Creating and Editing Geo-political Data
- Creating and Editing Offices and Contests
- Adding Choices
- Creating and Editing Ballot Layout
- Creating Audio Files
- Creating Memory Cards
- Creating project backups for delivery to the county
- Tabulating Results
- Election Night Reporting

Democracy Suite Accumulation Only EMS Training:

This course introduces Counties to concepts in EMS. Topics include:

- Loading and restoring an election from backup
- Adding Choices
- Creating Memory Cards
- Tabulating Results
- Election Night Reporting

Election Day Rover Training:

This course provides familiarity with Dominion Voting hardware and teaches what is required to support the equipment on Election Day. The major emphasis in this course is on election equipment troubleshooting.

- Preparing for Election Day
- Opening and Closing the polls
- Processing Voters
- Assisting Voters with Special Needs
- Troubleshooting Election Day Problems

Train the Trainer Poll Worker Training:

This course is a train the trainer course that covers how to train Election Day poll workers. This course focuses on teaching trainers how to become better at delivering training, along with covering everything to be included in a poll worker training class. Topics include:

- Training Techniques
- Learning Styles
- Presentation Skills
- Preparing for Election Day
- Opening and Closing the Polls
- Processing Voters
- Assisting Voters with Special Needs
- Managing the Polling Place

Clarification Question

Per the Questions and Answers Suppliers were requested to provide a high level in depth training plan and documentation for GASOS staff on the setup and use of the proposed EMS in creating and configuring election databases for use in Georgia elections and primaries. In reference to: Section I. Implementation Plan of the Background and Scope of Work:

Phase 1 will be the full inventory distribution and necessary training of up to ten (10) counties selected by GASOS to participate in a pilot project to be executed in November 2019. The pilot equipment will be used in any associated November 2019 election scheduled for the selected counties.

Phase 2 will be broken into two parts. Phase 2 – Part 1 will be distributing a minimum of five (5) BMD, two (2) PPS, and one (1) EMS computer to each county (159). These components will facilitate election official and poll worker training activities. Phase 2 – Part 2 will be the full distribution of all equipment to the counties including training. Phase 2 – Parts 1 and 2 will begin after the distribution of equipment to the counties participating in the scheduled pilot project in November 2019.

Completion of Phase 2 – Part 1 will be completed by end of the fourth quarter of 2019 (December 31, 2019). Completion of Phase 2 – Part 2 will be completed prior to the end of the first quarter of 2020 (March 31, 2020).

Georgia Implementation Training Plan

The following is an in-depth training plan as requested and is submitted with the understanding that training dates and training content are subject to change pending award of the contract and the outcome of collaboration with the GASOS/County Election Officials.

Pre-Training Tasks

2 Days: 7/16 to 7/17 - Meeting with GASOS and GASOS-selected County Election Officials to customize training documentation, syllibi, demonstration project and ballots to reflect GA election procedures and terminology.

18 Days: 7/15 to 8/1 - Customized training documentation, syllibi, demonstration project and ballot development.

8 Days: 8/2 to 8/9 - GASOS review and approval of final training documentation, syllibi, demonstration project and ballot and set/confirm the training schedule.

Phase 1 Training Plan

GASOS – 8/12 to 8/23 – 10 Days

- Election Programming – 4 1/2 Days
- DSuite Administrator and User – 2 Days
- ICX-BMD/ICP Operator – 1 Day
- ICC/ADJ Administration – 1 Day
- ICC/ADJ Operator – ½ Day
- UOCAVA – 1 Day

Counties – Administrative/User – 8/26 to 9/9 – 2 Regional Trainings - 4 Days Each

- DSuite Administrator and User – 2 Days
- ICC/ADJ Administration – 1 Day
- UOCAVA – 1 Day

Counties – Operator/Pollworker – 9/10 to 9/13 – 2 Regional Trainings - 2 Days Each

- ICX-BMD/ICP Operator – 1 Day
- ICC/ADJ Operator – ½ Day
- Pollworker Train the Trainer – ½ Day

Phase 2 Training Plan

Counties not holding December Runoff Election

Counties – Administrative/User – 11/11 to 12/13 – Regional Trainings - 4 Days Each

- DSuite Administrator and User – 2 Days
- ICC/ADJ Administration – 1 Day
- UOCAVA – 1 Day

Counties – Operator/Pollworker – 11/11 to 12/13 – Regional Trainings - 2 Days Each

- ICX-BMD/ICP Operator – 1 Day
- ICC/ADJ Operator – ½ Day
- Pollworker Train the Trainer – ½ Day

Counties holding December Runoff Election

Counties – Administrative/User – 12/9/2019 to 1/17/2020 – Regional Trainings - 4 Days Each

- DSuite Administrator and User – 2 Days
- ICC/ADJ Administration – 1 Day
- UOCAVA – 1 Day

Counties – Operator/Pollworker – 12/9/2019 to 1/17/2020 – Regional Trainings - 2 Days Each

- ICX-BMD/ICP Operator – 1 Day
- ICC/ADJ Operator – ½ Day
- Pollworker Train the Trainer – ½ Day

Courses

DSuite Election Programming – 5 Days

- Democracy Suite Election Programming Software Overview
- Template (Master) Election Project Concepts
- Election Programming Phases
- Introduction to Election Event Designer
- Working with Election Projects – Manual Project Build
- Election Project Definition – Primary and General Elections
- Divisioning – Districts, Precincts, and Elector and Ballot Groups
- Election Event – Contests and Candidates
- Localization – Language Management
- User Management
- Advancing to Election Project Styling
- Ballot Styling and Templates
- Translations – Single and Multiple Language
- Creating the Ballots and Audio Ballot Files
- Previewing Audio Ballot Files
- Creating Electronic Ballot Headers
- Tabulation Setup
- Preparing Proofing Packages
- Create Election (Tabulator) Files
- Create Final Project Backup for Transfer to County
- Advanced Functions – Creating Template (Master) Projects and Using Election Data Translator for Import/Export of Election Definition Data

DSuite Administrator and User – 2 ½ Days

- Introduction to Democracy Suite
  - Democracy Suite Software Component Overview
  - Tabulator Systems Overview
    - ImageCast Precinct Ballot Scanner – ICP
    - ImageCast X-Ballot Marking Device – ICX-BMD
    - ImageCast Central – ICC
  - Review of Quick Reference Guides
  - Additional System Components
  - Consumable Items
  - Voting System Process Overview
  - Generic Election Timeline and Workflow Responsibilities Review
- The Election Proofing Process
  - Overview of the County Proofing Process
  - The Election Proofing Package
  - Proofing Ballots
  - Proofing Reports
  - Proofing Audio Ballot Files
- Election Preparation
  - Election Event Designer – EED – Programming the Tabulators
  - Setting Up ImageCast Central – ICC
  - Setting Up Adjudication
- Logic and Accuracy Testing
  - Testing Steps Overview
  - Test Deck Overview
  - Logic and Accuracy Test Procedures
    - ICX-BMD/ICP
    - ICC with Adjudication
    - RTR
- Results Talley and Reporting - RTR
  - Overview of RTR
  - Opening an Election in RTR
  - RTR Settings
  - Loading Election Results
  - Managing Results Files and Tabulators in RTR
  - Manual Entry of Results
  - Results Reporting and Exporting
  - Exporting Results Manually
- Backing up the Final Results
- Purging Test Results

ICC/ADJ Administration – 1 Day

- Overview of ICC and ADJ Functionality
- Setting Up the ICC – Loading the Tabulator Files and Scanner Configuration
- Setting Up RTR to Manage, Monitor and Automatically Upload Results From ICC/ADJ
- Setting Up Adjudication – Loading the Election and Setting Conditions
- Logic and Accuracy Testing
- Ballot Handling
    - Scanning Ballots and Common problems
    - Batch Handling
        - Rejecting and Resetting batches
        - Deleting Batches
- Adjudicating Ballots
    - Standard User Vs. Administrative User
    - Ballot Overlays
    - Ballot Review and AuditMark
    - Write-in Resolution
    - Submitting Batches
    - Managing Quarantined Ballots
    - Configuring and Managing Report Profiles

UOCAVA – 1 Day

- Configuring UOCAVA
    - Display
    - Language Management
    - Voter ID and PIN Options
- Tabulator Management
    - Importing Election Files
    - Configuring Parameters
- Download Administration
    - Editing the Ballot Package
    - Cover Sheet, Affidavit, and Return Envelope Settings
    - Security Question Administration
- User Management
- Customization
    - Logos
    - Color Schemes
- Voter List Management
- Accessibility
- Testing

- Reporting

ICX-BMD/ICP Operator – 1 Day

- ICP Operations
    - Hardware Overview
    - Loading/Changing Paper Tape
    - Loading the Memory Cards
    - Acceptance Testing
    - Maintenance and Troubleshooting
- ICX-BMD Operations
    - Hardware Overview
    - Loading Paper and Toner in the BMD Printer
    - Loading Election Files
    - Acceptance Testing
    - Maintenance and Troubleshooting
- Logic and Accuracy Testing
    - Test Decks and Vote Sims
- Voting Equipment in the Polling Place
    - Setting up the Equipment
    - Opening the Polls
    - Activating Voter Cards
    - Voting on the ICX-BMD/ICP
    - Closing the polling place

ICC/ADJ Operator – ½ Day

- Ballot Handling
    - Scanning Ballots and Common problems
    - Batch Handling
        - Rejecting, Resetting, and Deleting Batches
- Adjudicating Ballots
    - Ballot Overlays
    - Ballot Review and AuditMark
    - Write-in Resolution
    - Quarantining Ballots

Pollworker Train the Trainer – ½ Day

- Training Techniques
- Learning Styles
- Presentation Skills
- Voting Equipment in the Polling Place
    - Setting up the Equipment
    - Opening the Polls
    - Activating Voter Cards
    - Voting on the ICX-BMD/ICP
    - Troubleshooting

- Closing the Polls

Section 9 – Training and Support – State Level

File 9-3 GASOS Train EPoll

9.3 Provide extensive, in-depth training plan and documentation for GASOS staff on the setup and use of the proposed EPDMS and EPolls.

The KNOWiNK training staff will use a training methodology which has been proven successful with our 650 jurisdiction client base. This methodology is designed by Connie Schmidt, CMC, CERA and focuses on a hands-on approach to end user (poll worker) training. This allows the end user to develop a comfort and confidence in their ability to use the Poll Pad solution on Election Day.

For the GASOS, we propose two days of on-site training using the curriculum outlined below.

Our suggested training approach is an easily repeatable process and offers the advantage of being successfully tested time and time again. That being said, we are more than happy to accommodate the GASOS's unique vision for training procedures and want you and your poll workers to have the best training experience.

Our robust and comprehensive training program is focused on three main components to successfully administer the Poll Pad solution without the need for a KNOWiNK staff member intervening in any manner beyond providing requested support. The three areas of focus during training are:

- Meraki Mobile Device Management system training
- ePulse training
- Train the trainer

Meraki Mobile Device Management System training
This training focuses on teaching the end user how to manage their Poll Pads within the Meraki Mobile Device Management (MDM) system. Here, end users are trained on updating Poll Pad applications, ensuring proper restrictions are set, and how to monitor/remote wipe devices if needed. The objective of this course is to ensure that the End User understands the administrative components of the Meraki MDM system in which the Poll Pads are enrolled.

ePulse Training
ePulse is the backend election management system where the end user will be building elections, monitoring Poll Pads, and generating reports. This training is an in-depth walkthrough (or workshop) where the KNOWiNK trainer will provide detailed instructions on each component and then assist the end user in building an Election start to finish. The objective of this course is ensuring the end user feels comfortable and confident to prepare for, create, administer, and close out an election.

Train the Trainer

Train the trainer serves a dual purpose in our training modality. The first purpose is to train the end user in the KNOWiNK recommended manner of poll worker training. The second purpose is the detailed walkthrough of the Poll Pad solution as presented to the poll workers and voting public. This class covers the experience on Election Day beginning with the set-up of the Poll Pad solution, then moving through the various screen, statuses, and functionalities available. Following the walkthrough of the Poll Pad, the trainer will then consult with the End User to optimize Poll Worker Training and ensure the Poll Pad solution is configured to meet all the needs of the End User. The objective of this course is to ensure that the End User understands the functionality of the Poll Pad and is prepared to conduct training courses for their Poll Workers moving forward.

Prior to delivering specialized training curriculum to the GASOS, our team will meet with your staff and review existing training curriculum and polling place operations to evaluate how the new EPBs will work to closely match existing policies and procedures to ensure ease of understanding, familiar terminology and workflow.

Complimentary Webinar Training

In addition to the on-site training provided by KNOWiNK to train GASOS personnel on the Poll Pad solution, we also offer complimentary webinar trainings for subsequent elections at no cost to the GASOS and its Counties.

Available Webinars Post On-Site Training

- 2 Hours - ePulse (A refresher course allowing the jurisdictions and GASOS to ask specific ePulse related questions and improve comfortability with the Poll Pad solution's backend systems.)
- 1 Hour - Poll Pad (A course designed to walk through the different voter scenarios and features the Poll Pad solution provides.)

Training Facility Requirements

While KNOWiNK's Training is flexible enough to be utilized in most facilities, we do have an optimal facility configuration:

The room should be large enough for each attendee to be able to have their own Poll Pad to practice on (two square feet of table space)

- Internet connectivity is not required
- 2 HDMI capable Screens
- If using printers, then power outlet for each unit

KNOWiNK's Training staff will send out a detailed site survey prior to arrival in order to ensure that the GASOS and any attendees are set up for success.

On-Site Training Curriculum

Day 1: New Client Training | 8 hours

- 8:00AM-10:00AM - ePulse and Election building
- 10:00AM-12:00PM - Poll Pad Train-the-Trainer
- 12:00PM-1:00PM - Break
- 1:00PM-3:00PM - Post-election Poll Pad and ePulse
- 3:00PM-5:00PM - Open Session and Question and Answer

Day 2: Technical Staff Trainings | 6-8 Hours

- (No times listed due to the desire to be flexible for different staffing needs)
- (2-3 Hours) Technical Administrators Training
- (2-3 Hours) Technical Operations Staff and Support Staff Training
- (2 Hours) Meraki MDM Training

We are flexible and happy to work with the GASOS to adjust and customize the training as needed to fit your specific needs to test and deploy Poll Pad to its jurisdiction.

Typical Training Materials Provided by KNOWiNK

KNOWiNK will provide the GASOS with a variety of training materials including step by step user guides and checklists, videos, PowerPoint created specifically for the GASOS, and additional supplemental tools used for training.

Examples:

- ePulse – Operations Guide
- Meraki – Operations Guide
- Poll Pad – Administrator Operations Guide
- Poll Pad – Poll Worker Guide
- Poll Pad – Train-the-Trainer PowerPoint
- Poll Pad – Election Day Overview Video
- Poll Pad – Opening and Closing Checklists
- Poll Pad – Troubleshooting Guide
- Poll Pad – Logic and Accuracy Checklist
- MiFi – Quick Reference Sheet

Clarification Question

Per the Questions and Answers Suppliers were requested to provide a high level in depth training plan and documentation for GASOS staff on the setup and use of the proposed EMS in creating and configuring election databases for use in Georgia elections and primaries. In reference to: Section I. Implementation Plan of the Background and Scope of Work:

Phase 1 will be the full inventory distribution and necessary training of up to ten (10) counties selected by GASOS to participate in a pilot project to be executed in November 2019. The pilot equipment will be used in any associated November 2019 election scheduled for the selected counties.

Phase 2 will be broken into two parts. Phase 2 – Part 1 will be distributing a minimum of five (5) BMD, two (2) PPS, and one (1) EMS computer to each county (159). These components will facilitate election official and poll worker training activities. Phase 2 – Part 2 will be the full distribution of all equipment to the counties including training. Phase 2 – Parts 1 and 2 will begin after the distribution of equipment to the counties participating in the scheduled pilot project in November 2019.

Completion of Phase 2 – Part 1 will be completed by end of the fourth quarter of 2019 (December 31, 2019). Completion of Phase 2 – Part 2 will be completed prior to the end of the first quarter of 2020 (March 31, 2020).

Georgia Implementation Training Plan

The following is an in-depth training plan for the Poll Pad electronic poll book as requested and is submitted with the understanding that training dates and training content are subject to change pending award of the contract and the outcome of collaboration with the GASOS/County Election Officials.

Roles and Training Suggestions

1. Identify roles i.e.:
    a. GASOS
        i. Administrator
        ii. Support
        iii. Technicians
    b. County User
        i. Administrator
        ii. Trainer
        iii. Technicians
        iv. End User (Poll Site)
2. Training Deployment Types:
    a. Localized
    b. Regional
    c. Web Based

Pre-Training Tasks

Documentation Review: 2 Days 7/16 to 7/17

- Meetings with GASOS and GASOS-selected County Election Officials to customize training documentation

Documentation Completion: 18 days 7/15 to 8/1

- Creation of Customized training documentation

Documentation Approval: 2 days 8/1 to 8/3

Phase 1 Training Plan

Localized: 2 Days 8/6 to 8/7 -Training offered to an individual entity on site

- Offered to GASOS prior to Regional Trainings
- Focus on ePulse and needs of state for deployment/implementation purposes

ePulse: Focus of training is the comprehensive utilization of the ePulse management system prioritizing all modules said locality will be deploying, including but not limited to:

- Election building
- Poll Pad management as related to ePulse
- Issue Tracking
- Configuration management
- Poll Worker Management
- Messaging
- Election day/Post election Reporting
- Training Mode Creation/Utilization

Two Regional Training: 1 Day Each 8/20-8/21 - Training offered to each GA region to introduce the Poll Pad solution and Train the Trainers:

Full Poll Pad Training: Focus of Training will be all aspects of the Poll Pad Solution including:

- Set Up,
- Checking In Voters
- Troubleshooting,
- Voter Check-In Modifications,
- Voter Status Resolutions,
- End of Night Reports,
- Packing Up

Train the Trainer: Training focused on teaching the Counties KNOWiNK's best practices for Poll Pad training. This includes:

- Walkthrough of Full Poll Pad Training
- Explanation of process
- Consultation on integrating with current Locality training procedures
- Training Materials (PowerPoint and ID cards)

Poll Worker Pilot Training: Upon Request - Up to 10 days in October – Training focusing on preparing the Poll Workers for election day

Poll Pad Training: Focus of Training will be basic Election Day Aspects of the Poll Pad Solution including:

- Set Up,
- Checking in Voters,
- Troubleshooting,
- End of Night Reports,
- Packing Up

Phase 2 Training Plan

Counties not holding December Runoff Election

Regional Trainings: 1 Day Each Beginning 11/11 - Training offered to each GA region to introduce the Poll Pad solution and Train the Trainers:

Full Poll Pad Training: Focus of Training will be all aspects of the Poll Pad Solution including:

- Set Up,
- Checking In Voters
- Troubleshooting,
- Voter Check-In Modifications,
- Voter Status Resolutions,
- End of Night Reports,
- Packing Up

Train the Trainer: Training focused on teaching the Counties KNOWiNK's best practices for Poll Pad training. This includes:

- Walkthrough of Full Poll Pad Training
- Explanation of process
- Consultation on integrating with current Locality training procedures
- Training Materials (PowerPoint and ID cards)

Poll Worker Pilot Training: Upon Request – Beginning after 11/11 – Training focusing on preparing the Poll Workers for election day

Poll Pad Training: Focus of Training will be basic Election Day Aspects of the Poll Pad Solution including:
- Set Up,
- Checking in Voters,
- Troubleshooting,
- End of Night Reports,
- Packing Up

Counties holding December Runoff Election

Regional Trainings: 1 Day Each Beginning 12/9 - Training offered to each GA region to introduce the Poll Pad solution and Train the Trainers:

Full Poll Pad Training: Focus of Training will be all aspects of the Poll Pad Solution including:
- Set Up,
- Checking In Voters
- Troubleshooting,
- Voter Check-In Modifications,
- Voter Status Resolutions,
- End of Night Reports,
- Packing Up

Train the Trainer: Training focused on teaching the Counties KNOWiNK's best practices for Poll Pad training. This includes:
- Walkthrough of Full Poll Pad Training
- Explanation of process
- Consultation on integrating with current Locality training procedures
- Training Materials (PowerPoint and ID cards)

Poll Worker Pilot Training: Upon Request – Beginning 12/9 – Training focusing on preparing the Poll Workers for election day

Poll Pad Training: Focus of Training will be basic Election Day Aspects of the Poll Pad Solution including:
- Set Up,
- Checking in Voters,
- Troubleshooting,

- End of Night Reports,
- Packing Up

Section 10 – Training and Support – County Level

File 10-1 County Training

10-1 Provide an extensive, in-depth training plan for county election officials on the setup and use of the proposed PPS, CSD, and BMD. Include a diagram of Advance-In Person voting and Election Day setup of all proposed SVS components.

Dominion

Dominion will work closely with Georgia to ensure that the training program is customized to meet your specific needs. Dominion will prepare and provide all needed training material, which includes training manuals, quick reference guides, website instructional courses and technical reference manuals when necessary. Training and curriculum particular to the resources, staff, and needs of Georgia will be customized as part of the implementation meetings and materials will be provided before implementation for both hardware and software functions. In addition to the formal training, our specialists will work to transfer the required knowledge and skills relevant to County staffs, with the objective of ensuring that each county is empowered to manage all aspects of the system's availability and functionality. Dominion takes pride in our ability to transfer to local officials the skills necessary to conduct even complex elections with autonomy.

Dominion's training shall focus on providing the election administration staff the necessary knowledge, as determined by the Project Management Team for successful implementation and effective operation of the voting system. Dominion's training shall be tailored, using various formats, implementing adult learning principles, and proper course pacing. Training customization begins with tailoring the courses covering hardware and software system operations, pollworker train the trainer and voter outreach. Dominion will provide training regionally, on and off-site and coordinate all scheduling with each County.

Dominion Training Focus and Approach

At Dominion Voting Systems our training platforms focus on providing poll workers and election administration staff with the necessary knowledge to implement a voting system that will smoothly and efficiently process voters. We accomplish this through training customization, utilizing various training formats, implementing adult learning principles, and proper pacing within our courses.

Training customization begins with tailoring our courses to a specific jurisdiction's needs. Courses cover both hardware and software, and they detail all phases of the election. One aspect of the customization is utilizing different formats when creating training, including instructor led classes in person, instructor led classes online, and self-paced online eLearning.

In all training formats, we base our training on the main principles of adult learning. Adults learn best when material is presented in a variety of ways. To this end, our trainers utilize auditory, visual, and hands-on training techniques. Our classes follow the "Explain, Demonstrate, Do" method. Students hear an explanation of their responsibilities, see it demonstrated, and then have a chance to practice it themselves. For example, our online eLearning presents case studies and step-by-step simulations to enable learners to experience the hardware or software virtually without having to unpack a voting unit.

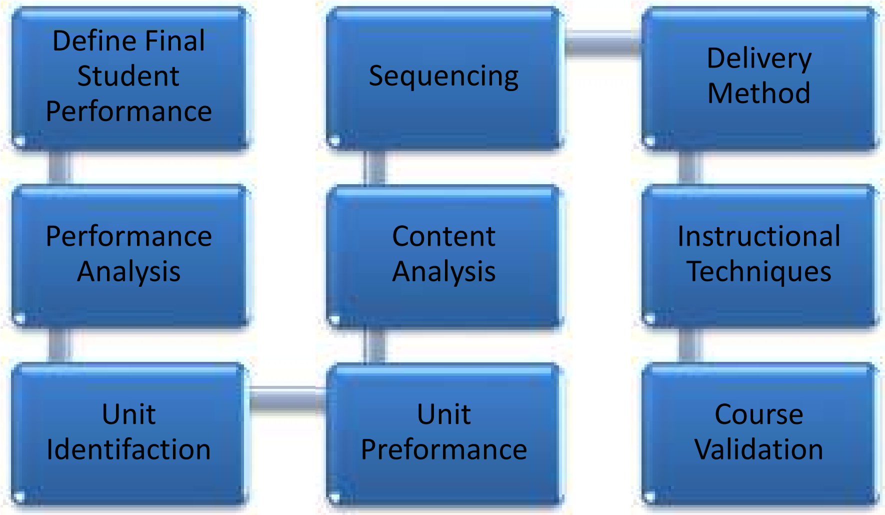
In order to maximize retention, training classes must be properly divided and paced. In our case, poor retention means an unsuccessful election, which is unacceptable. Our training materials are divided into small, manageable pieces that enable our instructors to cover information without exhausting a student's attention span. Each section of our training lasts no longer than ninety minutes, and then a student's knowledge is thoroughly checked through hands on exercises and progress checks.

Dominion Voting understands that training must support the local state and county election process. We work in conjunction with the State's election staff to define custom training curriculums, so they fit into the respective county's normal election practices and processes.

We will also work with Georgia to create any custom training materials that all parties deem necessary. Any source files or camera-ready images will be available to be given to Georgia as needed.

Instructional Design

At Dominion Voting our instructional design follows a Nine Step Model. This model starts with defining what the final student performance is and what the goal of the course needs to be.



Once that final performance is defined, we consider performance analysis and identify "What is the least they need to learn?" Next, we determine Unit Identification and Unit level exercises, perform content analysis, define sequencing and delivery methods, and finally validate the course.

Delivery Methodology

At Dominion Voting we strive for the best customer service in the business and our flexibility to deliver training in multiple formats gives our customers a choice of many different delivery methods for training.

Instructor Led – Training conducted on-site with a certified election systems trainer. These in person classes are structured to provide the students the best opportunity to learn with a face to face trainer. All Dominion Voting Training courses are offered in this delivery method. Training for the GASOS staff will be conducted in the Dominion facility or in the SOS offices, whichever is deemed appropriate. This type of training is intended to be provided regionally for the Counties and can be conducted in a specific county as well.

Instructor Led Web Based – The instructor led WebEx classes are ideal for customers who need to be trained but onsite training is not possible. These classes are structured with online instructor led lectures and discussion along with offline homework and lab assignments. Web Based blended classes are offered for any of Dominion Voting's software training courses.

Self-Paced e-learning – Dominion Voting offers a complete library of self-paced e-learning courses which includes both hardware and software training. These courses are designed to deliver training in a unique format while keeping the student engaged and active.

Our online training courses provide step-by-step explanations of the needed information. We use the best eLearning tools to create interactive and engaging training. At the end of a course, a student is required to pass an assessment to receive a certificate of completion.

Conceptual Change Management Plan

Training/Change Management: The Implementation Team will be responsible for all Change Management, Operational Improvement and Training activities including the development of communication plans, organizational change management activities as well as the training required for staff and poll workers. It is imperative that there is strong on-the-ground presence with respect to training and change management and that the proposed team members are fully aware of the current state of the project, at all times.

Although many Vendors will propose training as part of the overall project scope, they will leave out a critical component in managing the implementation of the new system: the people it will affect. Change Management activities are critical to ensuring that staff are transitioned from the old system to the new – that includes a review of existing functionality, procedures and processes and a documentation of new procedures and processes. The Dominion Team will assist the GASOS in reviewing existing procedure manuals and the creation of new documentation sets to ensure that each county has the information that is required to support the system. If Change Management activities are not considered as part of the overall scope of the project – it will be difficult to initiate change and the user buy-in that is essential as part of this transition.

County & Poll worker Training / Change Management Workshop: These workshops will be designed to better understand the training requirements that will be needed to transfer knowledge of the system to designated County Staff and Poll workers. Information will be gathered to ascertain the most effective approach to provide training. Information such as the number of poll workers that will be required for successful Election Day support and the relative number of classes that will be required, are some of the items up for discussion. In addition, Change Management activities will also be discussed, such as how best to incorporate staff into the process (project newsletters, e-mail updates, etc.).

Critical to the success of a change management plan is an understanding of the current system. In addition to the initial project activity of completing an analysis of the existing system, Dominion's proposed project team includes people who were involved in the deployment of the current system. Not only will the analysis show what needs to be changed, but Dominion's team also has in depth expertise on the current Georgia system, making this process more efficient.

Regional Training Approach

Dominion Voting recognizes the value of implementing a training program centered around statewide consistency and standardization of processes and procedures. Dominion Voting will work with the GASOS to understand and incorporate required and/or recommended procedures and course material into all training deliverables and make sure all trainings and training materials meet the needs of the GASOS and its counties.

Prior to delivering any end-user training, Dominion Voting will customize all materials with GASOS input. Dominion Voting will host workshops at the GASOS facility or an agreed upon location and bring together the necessary resources from both the State and Dominion Voting to make sure all training materials meet the needs of all stakeholders. Thereafter, Dominion Voting will work with the GASOS to set up regional training sessions in the 14 designated state regions. Each regional site will host 2 or 3 training sessions, each designed for a targeted audience, depending on the course material to be delivered in each session. Dominion Voting recognizes the need for flexibility and will schedule additional training sessions for supplemental information to be delivered or to accommodate anyone or any county who may not have been able to attend initial training sessions if necessary. The online Self-paced e-learning modules will be available as refresher training for anyone needing such at any time.

Training Curriculum

Dominion Voting offers the classes listed below. All classes include quick reference guides, training manuals, and technical reference manuals when necessary. Dominion Voting will work to customize Election Day training materials to suit the Georgia's specific needs.

All instructors are employees of Dominion Voting.

Training Class Description	User Category	Number of Days/ Hours	Max Number of Students
D-Suite Election Management System Election Event Designer Training	GASOS	10 days	10
D-Suite Accumulation only EMS Training	GASOS, County Administrators, Division Users	2 days	10
D-Suite Results Tally and Reporting Training	GASOS, County Administrators, Division Users	1 day	10
D-Suite ICP Training	GASOS, County Administrators, Division Users	1 day	20 per class
D-Suite ICX Training	GASOS, County Administrator, Division User	1 day	10 per class
D-Suite ICC & Adjudication Training	GASOS, County Administrator, Division User	1 day	15- 20
D-Suite UOCAVA Training	GASOS, County Administrator, Division User	1 day	15-20
D-Suite Mobile Ballot Printing Training	GASOS, County Administrator, Division User	1 day	15 -20
Pollworker Train the Trainer	Poll Workers Trainers	2 days	6 per class
Election Day Rover Training	Election Day Rovers	½ day	20

Course Descriptions – Outline

Hardware operations training:

This course introduces the Dominion Voting hardware. Topics include:

- Setup of the Equipment
- Opening Polls
- Processing Ballots
- Accessible Voting
- Closing Polls
- Acceptance Testing
- Troubleshooting
- Performing L&A

Democracy Suite EMS Training:
This course introduces election programming concepts in EMS. Topics include:
- Creating and Editing Geo-political Data
- Creating and Editing Offices and Contests
- Adding Choices
- Creating and Editing Ballot Layout
- Creating Audio Files
- Creating Memory Cards
- Tabulating Results
- Election Night Reporting

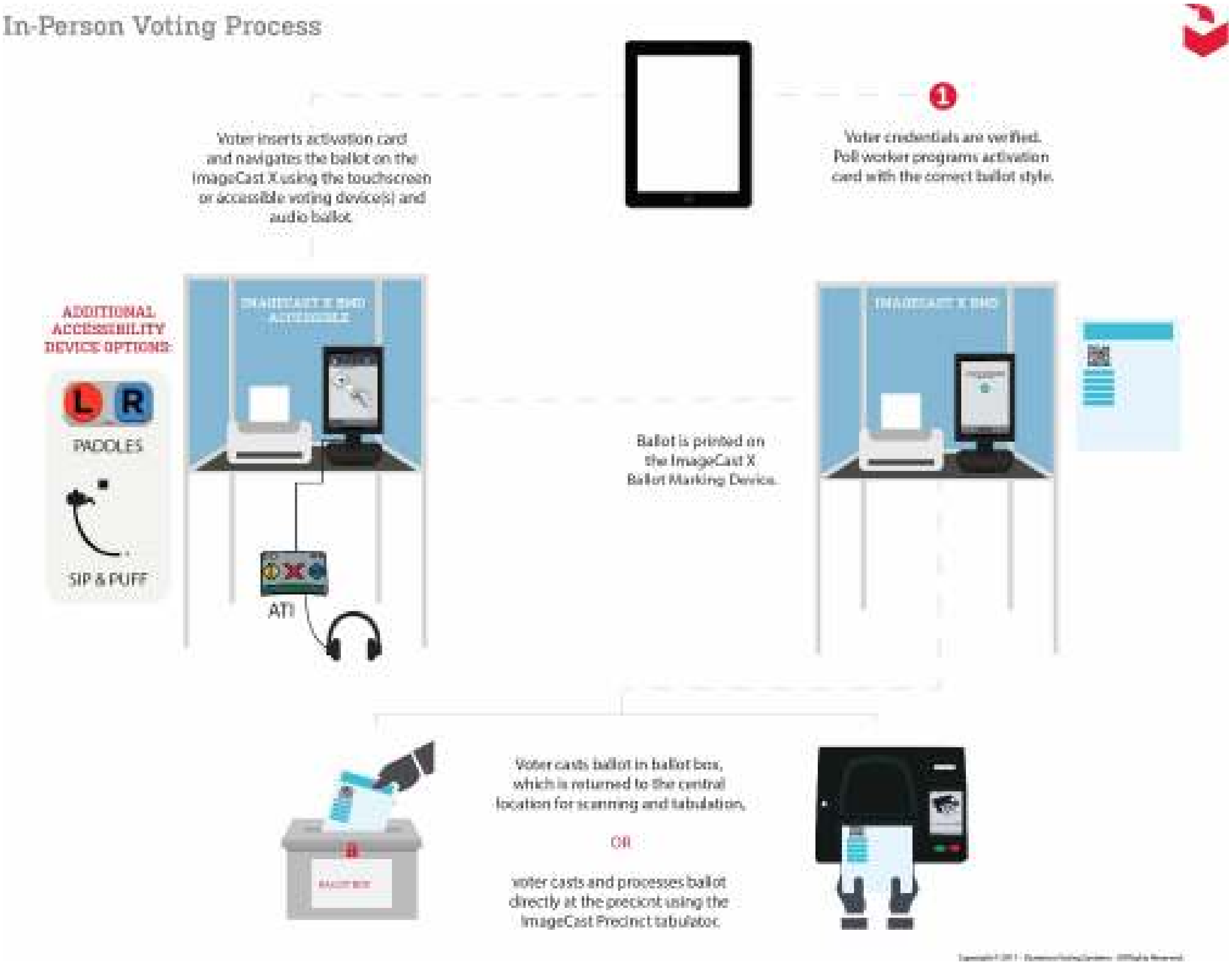
Election Day Rover Training:
This course provides familiarity with Dominion Voting hardware and teaches what is required to support the equipment on Election Day. The major emphasis in this course is on election equipment troubleshooting.
- Preparing for Election Day
- Opening and Closing the polls
- Processing Voters
- Assisting Voters with Special Needs
- Troubleshooting Election Day Problems

Train the Trainer Poll Worker Training:
This course is a train the trainer course that covers how to train Election Day poll workers. This course focuses on teaching trainers how to become better at delivering training, along with covering everything to be included in a poll worker training class. Topics include:

- Training Techniques
- Learning Styles
- Presentation Skills

- Preparing for Election Day
- Opening and Closing the Polls
- Processing Voters
- Assisting Voters with Special Needs
- Managing the Polling Place

Diagram below shows the typical in-person voting process:


In-Person Voting Process
1
ADDITIONAL ACCESSIBILITY DEVICE OPTIONS:
L
R
PADDLES
SIP & PUFF
IMAGECAST X BMD ACCESSIBLE
ATI
IMAGECAST X BMD
OR

Voter inserts activation card and navigates the ballot on the ImageCast X using the touchscreen or accessible voting device(s) and audio ballot.

Voter credentials are verified. Poll worker programs activation card with the correct ballot style.

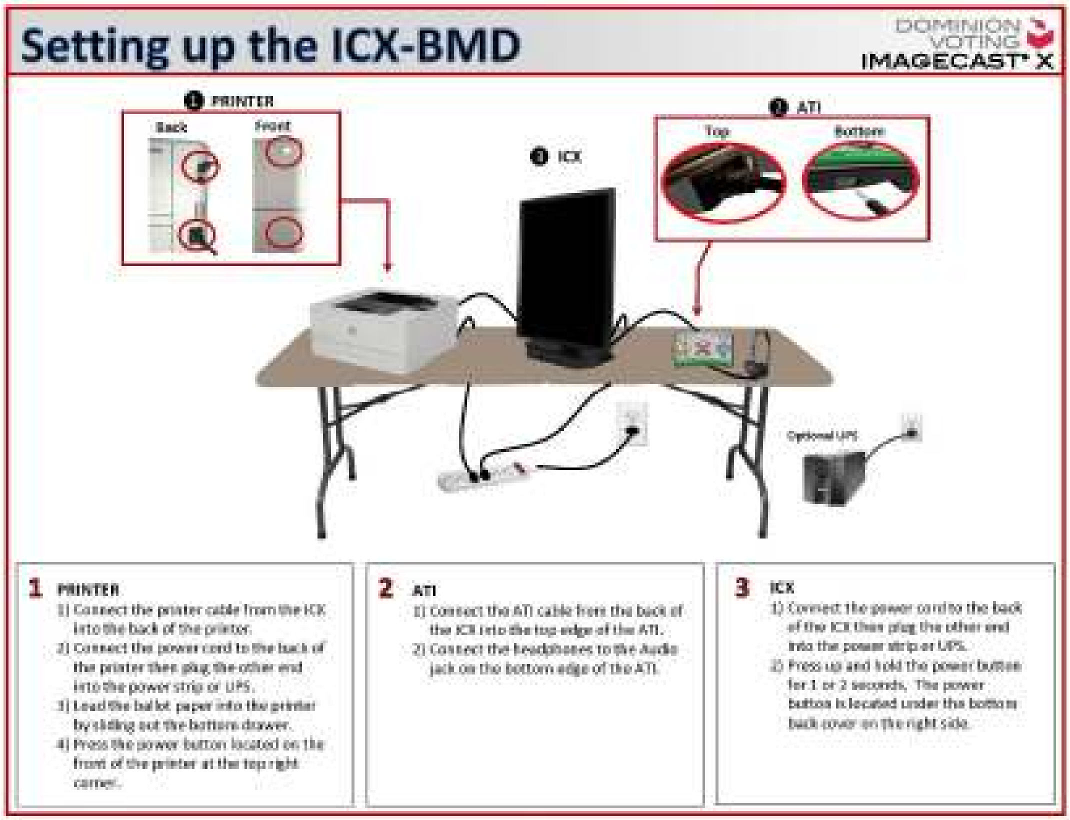
Ballot is printed on the ImageCast X Ballot Marking Device.

Voter casts ballot in ballot box, which is returned to the central location for scanning and tabulation,

OR

voter casts and processes ballot directly at the precinct using the ImageCast Precinct tabulator.

Sample setting up the ImageCast X



Setting up the ICX-BMD

❶ PRINTER
Back
Front
❸ ICX
❷ ATI
Top
Bottom
Optional UPS

1 PRINTER

1) Connect the printer cable from the ICX into the back of the printer.
2) Connect the power cord to the back of the printer then plug the other end into the power strip or UPS.
3) Load the ballot paper into the printer by sliding out the bottom drawer.
4) Press the power button located on the front of the printer at the top right corner.

2 ATI

1) Connect the ATI cable from the back of the ICX into the top edge of the ATI.
2) Connect the headphones to the Audio jack on the bottom edge of the ATI.

3 ICX

1) Connect the power cord to the back of the ICX then plug the other end into the power strip or UPS.
2) Press up and hold the power button for 1 or 2 seconds. The power button is located under the bottom back cover on the right side.

KNOWiNK

The KNOWiNK training staff will use a training methodology which has been proven successful with our 650 jurisdiction client base. This methodology is designed by Connie Schmidt, CMC, CERA and focuses on a hands-on approach to end user (poll worker) training. This allows the end user to develop a comfort and confidence in their ability to use the Poll Pad solution on Election Day.

For County election official trainings, we suggest hosting regional trainings organized by the State's 14 regions. Each region will be offered two dates to attend a one-day class of training using similar curriculum as the GASOS training but tailored to County specific responsibilities. The proposed training curriculum is described below.

Our suggested training approach is an easily repeatable process and offers the advantage of being successfully tested time and time again. That being said, we are more than happy to accommodate the County's unique vision for training procedures and want you and your poll workers to have the best training experience.

Our robust and comprehensive training program is focused on two main components to successfully administer the Poll Pad solution without the need for a KNOWiNK staff member intervening in any manner beyond providing requested support. The three areas of focus during training are:

- ePulse training
- Train the trainer

ePulse Training

ePulse is the backend election management system where the end user will be building elections, monitoring Poll Pads, and generating reports. This training is an in-depth walkthrough (or workshop) where the KNOWiNK trainer will provide detailed instructions on each component and then assist the end user in building an Election start to finish. The objective of this course is ensuring the end user feels comfortable and confident to prepare for, create, administer, and close out an election.

Train the Trainer

Train the trainer serves a dual purpose in our training modality. The first purpose is to train the end user in the KNOWiNK recommended manner of poll worker training. The second purpose is the detailed walkthrough of the Poll Pad solution as presented to the poll workers and voting public. This class covers the experience on Election Day beginning with the set-up of the Poll Pad solution, then moving through the various screen, statuses, and functionalities available. Following the walkthrough of the Poll Pad, the trainer will then consult with the End User to optimize Poll Worker Training and ensure the Poll Pad solution is configured to meet all the needs of the End User. The objective of this course is to ensure that the End User understands the functionality of the Poll Pad and is prepared to conduct training courses for their Poll Workers moving forward.

Meraki Mobile Device Management System training

KNOWiNK recommends only large jurisdictions manage their own MDM systems. We can work with the GASOS and its jurisdictions to determine which (IF ANY) should be managed independently and which should be managed by KNOWiNk or the GASOS.

This training focuses on teaching the end user how to manage their Poll Pads within the Meraki Mobile Device Management (MDM) system. Here, end users are trained on updating Poll Pad applications, ensuring proper restrictions are set, and how to monitor/remote wipe devices if needed. The objective of this course is to ensure that the End User understands the administrative components of the Meraki MDM system in which the Poll Pads are enrolled.

Prior to delivering specialized training curriculum to the County, our team will meet with your staff and review existing training curriculum and polling place operations to evaluate how the new EPBs will work to closely match existing policies and procedures to ensure ease of understanding, familiar terminology and workflow.

Complimentary Webinar Training

In addition to the on-site training provided by KNOWiNK to train County personnel on the Poll Pad solution, we also offer complimentary webinar trainings for subsequent elections at no cost to the County.

Available Webinars Post On-Site Training

- 2 Hours - ePulse (A refresher course allowing the county to ask specific ePulse related questions and improve comfortability with the Poll Pad solution's backend systems.)
- 1 Hour - Poll Pad (A course designed to walk through the different voter scenarios and features the Poll Pad solution provides.)

Training Facility Requirements

While KNOWiNK's Training is flexible enough to be utilized in most facilities, we do have an optimal facility configuration:

The room should be large enough for each attendee to be able to have their own Poll Pad to practice on (two square feet of table space)

- Internet connectivity is not required
- 2 HDMI capable Screens
- If using printers, then power outlet for each unit

KNOWiNK's Training staff will send out a detailed site survey prior to arrival in order to ensure that the County and any attendees are set up for success.

On-Site Training Curriculum

New Client Training

- 8:00am-10:00AM - ePulse and Election Building
- 10:00AM-12:00PM - Poll Pad Set-up and Train-the-Trainer
- 12:00PM-1:00PM - Break
- 1:00PM-2:00PM - Train-the-Trainer Consultation
- 2:00PM-3:00PM - Post-Election Poll Pad and ePulse
- 3:00PM-4:00PM - Training Breakdown and Q/A over Best Practices and Feedback

Typical Training Materials Provided by KNOWiNK

KNOWiNK will provide the County with a variety of training materials including step by step user guides and checklists, videos, PowerPoint created specifically for the county, and additional supplemental tools utilized for training.

Examples:

- ePulse – Operations Guide
- Poll Pad – Administrator Operations Guide
- Poll Pad – Poll Worker Guide
- Poll Pad – Train-the-Trainer PowerPoint
- Poll Pad – Election Day Overview Video
- Poll Pad – Opening and Closing Checklists
- Poll Pad – Troubleshooting Guide
- Poll Pad – Logic and Accuracy Checklist

Clarification Question

Per the Questions and Answers Suppliers were requested to provide a high level in depth training plan and documentation for GASOS staff on the setup and use of the proposed EMS in creating and configuring election databases for use in Georgia elections and primaries. In reference to: Section I. Implementation Plan of the Background and Scope of Work:

Phase 1 will be the full inventory distribution and necessary training of up to ten (10) counties selected by GASOS to participate in a pilot project to be executed in November 2019. The pilot equipment will be used in any associated November 2019 election scheduled for the selected counties.

Phase 2 will be broken into two parts. Phase 2 – Part 1 will be distributing a minimum of five (5) BMD, two (2) PPS, and one (1) EMS computer to each county (159). These components will facilitate election official and poll worker training activities. Phase 2 – Part 2 will be the full distribution of all equipment to the counties including training. Phase 2 – Parts 1 and 2 will begin after the distribution of equipment to the counties participating in the scheduled pilot project in November 2019.

Completion of Phase 2 – Part 1 will be completed by end of the fourth quarter of 2019 (December 31, 2019). Completion of Phase 2 – Part 2 will be completed prior to the end of the first quarter of 2020 (March 31, 2020).

Georgia Implementation Training Plan

The following is an in-depth training plan as requested and is submitted with the understanding that training dates and training content are subject to change pending award of the contract and the outcome of collaboration with the GASOS/County Election Officials.

Pre-Training Tasks

2 Days: 7/16 to 7/17 - Meeting with GASOS and GASOS-selected County Election Officials to customize training documentation, syllibi, demonstration project and ballots to reflect GA election procedures and terminology.

18 Days: 7/15 to 8/1 - Customized training documentation, syllibi, demonstration project and ballot development.

8 Days: 8/2 to 8/9 - GASOS review and approval of final training documentation, syllibi, demonstration project and ballot and set/confirm the training schedule.

Phase 1 Training Plan

GASOS – 8/12 to 8/23 – 10 Days

- Election Programming – 4 1/2 Days
- DSuite Administrator and User – 2 Days
- ICX-BMD/ICP Operator – 1 Day
- ICC/ADJ Administration – 1 Day
- ICC/ADJ Operator – ½ Day
- UOCAVA – 1 Day

Counties – Administrative/User – 8/26 to 9/9 – 2 Regional Trainings - 4 Days Each

- DSuite Administrator and User – 2 Days
- ICC/ADJ Administration – 1 Day
- UOCAVA – 1 Day

Counties – Operator/Pollworker – 9/10 to 9/13 – 2 Regional Trainings - 2 Days Each

- ICX-BMD/ICP Operator – 1 Day
- ICC/ADJ Operator – ½ Day
- Pollworker Train the Trainer – ½ Day

Phase 2 Training Plan

Counties not holding December Runoff Election

Counties – Administrative/User – 11/11 to 12/13 – Regional Trainings - 4 Days Each

- DSuite Administrator and User – 2 Days
- ICC/ADJ Administration – 1 Day
- UOCAVA – 1 Day

Counties – Operator/Pollworker – 11/11 to 12/13 – Regional Trainings - 2 Days Each

- ICX-BMD/ICP Operator – 1 Day
- ICC/ADJ Operator – ½ Day
- Pollworker Train the Trainer – ½ Day

Counties holding December Runoff Election

Counties – Administrative/User – 12/9/2019 to 1/17/2020 – Regional Trainings - 4 Days Each

- DSuite Administrator and User – 2 Days
- ICC/ADJ Administration – 1 Day
- UOCAVA – 1 Day

Counties – Operator/Pollworker – 12/9/2019 to 1/17/2020 – Regional Trainings - 2 Days Each

- ICX-BMD/ICP Operator – 1 Day
- ICC/ADJ Operator – ½ Day
- Pollworker Train the Trainer – ½ Day

Courses

DSuite Election Programming – 5 Days

- Democracy Suite Election Programming Software Overview
- Template (Master) Election Project Concepts
- Election Programming Phases
- Introduction to Election Event Designer
- Working with Election Projects – Manual Project Build
- Election Project Definition – Primary and General Elections
- Divisioning – Districts, Precincts, and Elector and Ballot Groups
- Election Event – Contests and Candidates
- Localization – Language Management
- User Management
- Advancing to Election Project Styling
- Ballot Styling and Templates
- Translations – Single and Multiple Language
- Creating the Ballots and Audio Ballot Files
- Previewing Audio Ballot Files
- Creating Electronic Ballot Headers
- Tabulation Setup
- Preparing Proofing Packages
- Create Election (Tabulator) Files
- Create Final Project Backup for Transfer to County
- Advanced Functions – Creating Template (Master) Projects and Using Election Data Translator for Import/Export of Election Definition Data

DSuite Administrator and User – 2 ½ Days

- Introduction to Democracy Suite
    - Democracy Suite Software Component Overview
    - Tabulator Systems Overview
        - ImageCast Precinct Ballot Scanner – ICP
        - ImageCast X-Ballot Marking Device – ICX-BMD
        - ImageCast Central – ICC
    - Review of Quick Reference Guides
    - Additional System Components
    - Consumable Items
    - Voting System Process Overview
    - Generic Election Timeline and Workflow Responsibilities Review
- The Election Proofing Process
    - Overview of the County Proofing Process
    - The Election Proofing Package
    - Proofing Ballots
    - Proofing Reports
    - Proofing Audio Ballot Files
- Election Preparation
    - Election Event Designer – EED – Programming the Tabulators
    - Setting Up ImageCast Central – ICC
    - Setting Up Adjudication
- Logic and Accuracy Testing
    - Testing Steps Overview
    - Test Deck Overview
    - Logic and Accuracy Test Procedures
        - ICX-BMD/ICP
        - ICC with Adjudication
        - RTR
- Results Talley and Reporting - RTR
    - Overview of RTR
    - Opening an Election in RTR
    - RTR Settings
    - Loading Election Results
    - Managing Results Files and Tabulators in RTR
    - Manual Entry of Results
    - Results Reporting and Exporting
    - Exporting Results Manually
- Backing up the Final Results
- Purging Test Results

ICC/ADJ Administration – 1 Day

- Overview of ICC and ADJ Functionality
- Setting Up the ICC – Loading the Tabulator Files and Scanner Configuration
- Setting Up RTR to Manage, Monitor and Automatically Upload Results From ICC/ADJ
- Setting Up Adjudication – Loading the Election and Setting Conditions
- Logic and Accuracy Testing
- Ballot Handling
    - Scanning Ballots and Common problems
    - Batch Handling
        - Rejecting and Resetting batches
        - Deleting Batches
- Adjudicating Ballots
    - Standard User Vs. Administrative User
    - Ballot Overlays
    - Ballot Review and AuditMark
    - Write-in Resolution
    - Submitting Batches
    - Managing Quarantined Ballots
    - Configuring and Managing Report Profiles

UOCAVA – 1 Day

- Configuring UOCAVA
    - Display
    - Language Management
    - Voter ID and PIN Options
- Tabulator Management
    - Importing Election Files
    - Configuring Parameters
- Download Administration
    - Editing the Ballot Package
    - Cover Sheet, Affidavit, and Return Envelope Settings
    - Security Question Administration
- User Management
- Customization
    - Logos
    - Color Schemes
- Voter List Management
- Accessibility
- Testing
- Reporting

ICX-BMD/ICP Operator – 1 Day

- ICP Operations
  - Hardware Overview
  - Loading/Changing Paper Tape
  - Loading the Memory Cards
  - Acceptance Testing
  - Maintenance and Troubleshooting
- ICX-BMD Operations
  - Hardware Overview
  - Loading Paper and Toner in the BMD Printer
  - Loading Election Files
  - Acceptance Testing
  - Maintenance and Troubleshooting
- Logic and Accuracy Testing
  - Test Decks and Vote Sims
- Voting Equipment in the Polling Place
  - Setting up the Equipment
  - Opening the Polls
  - Activating Voter Cards
  - Voting on the ICX-BMD/ICP
  - Closing the polling place

ICC/ADJ Operator – ½ Day

- Ballot Handling
  - Scanning Ballots and Common problems
  - Batch Handling
    - Rejecting, Resetting, and Deleting Batches
- Adjudicating Ballots
  - Ballot Overlays
  - Ballot Review and AuditMark
  - Write-in Resolution
  - Quarantining Ballots

Pollworker Train the Trainer – ½ Day

- Training Techniques
- Learning Styles
- Presentation Skills
- Voting Equipment in the Polling Place
  - Setting up the Equipment
  - Opening the Polls
  - Activating Voter Cards
  - Voting on the ICX-BMD/ICP
  - Troubleshooting
  - Closing the Polls

Section 10 – Training and Support – County Level

File 10-2 County Train Docs

Dominion

Dominion offers a library of documentation specific to individual roles and situations. Acceptance Check Lists, Unit Tracking Procedures, and Troubleshooting Guides are examples of items used in Preventative Maintenance and Hardware Acceptance Training. User Guides and Quick Reference Guides are examples of items used in Election Poll Worker Training. User Guides are comprehensive textual documents, covering all facets of a topic such as Vote Tabulators and Accessible Components. Quick Reference Guides are brief, focused and image-oriented; they are designed for reference-at-a-glance in practical election situations.

In addition to providing the full EAC Technical Data Package provided in response to question 18-1 TDP, we will work with the State and Counties to develop and tailor online video training, election day manuals, and quick reference guides specific to statewide and county-specific needs. Samples of documentation include the following embedded files:

Pollworker_guide_ICX_Prime_SC.pdf
ICP Pollworker Training Guide no n
Accum Only Training Manual 5.5
ADJ QRG v1.0.pptx
ICC QRG v1.0.pptx
ICP NO AVS QRG Plastic BB.pptx
ICX Prime-BMD QRG v1.1 Updated 3-19 I
RTR QRG v1.0.pptx

In-Person Training

Dominion will provide on-site, hands-on training sessions for hardware acceptance training, preventative maintenance training, commissioner trainer training, COC, ROV and other election staff training. Past implementations have proven that it is very important for all using the equipment to have the opportunity to handle and operate the vote tabulator and accessible voting components in a hands-on class setting.

Self-Study Materials

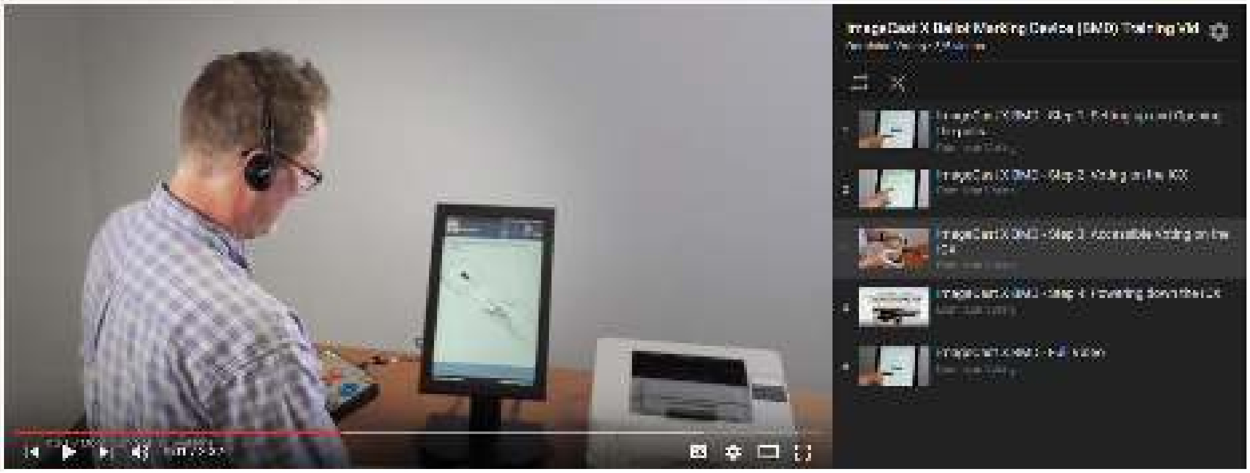
Dominion provides an array of self-study materials, suited to individual approaches to learning. These include self-paced online eLearning courses, online instructional videos, and documents. We can share and provide materials to be used in the videos that the State creates of their Commissioner training and other media.

Self-Paced E-Learning

Dominion offers a complete library of self-paced e-learning courses, which include both hardware and software training. These courses are designed to deliver training in a unique format, while keeping the learner engaged and active. Our online training courses provide step-by-step explanations of the needed information. We use the best eLearning tools such as Captivate and Articulate to create interactive and engaging training. At the end of a course, a student is required to pass an assessment in order to receive a certificate of completion.

Online Instructional Videos

Dominion offers a library of online, on-demand instructional videos, covering a range of topics such tabulator and accessible voting on the ImageCast X. The videos provide step-by-step explanations of the particular topic, and are divided into chapters for quick and easy reference.



Dominion will work with the State to create and customize training materials that are applicable to the State, Parishes and your constituents. We provide below some sample training materials in the form of links to training videos and some sample training documents. These materials can be used to supplement the training videos that your office creates for DVD distribution to the parish offices.

VIDEO LINKS

o Election Event Designer – User Procedures: https://youtu.be/0cB9XBWfHqE
o ImageCast Central – User Procedures: https://youtu.be/3ENHzmFdMHU
o ImageCast Voter Activation – User Procedures: https://youtu.be/rhtIzWdR-do
o Results Tally & Reporting – Election Night Reports: https://youtu.be/QIlRBuaungM
o Results Transfer Manager – User Procedures: https://youtu.be/W2BjQMcaGuY
o Results Tally & Reporting – User Procedures: https://youtu.be/ghL5rBrygpA
o ImageCast X - https://www.youtube.com/playlist?list=PLsiDPMsLSeoDf3IgQnJX5oT-MecOochnH

Below we provide a general point by point response detailing where each topic is covered.

10.2 Provide a training plan and documentation to each county elections office on, at minimum, the following:

1. **Loading prepared election database to EMS.**

   Covered in EMS EED training and Accumulation only EMS training.
2. **Setting amount of Absentee by Mail scanning, Absentee In-Person voting, Election-Day use, and Provisional scanning equipment in EMS to be used for a given election.**

   Covered in EMS EED training and Accumulation only EMS training
3. **Viewing and printing pre-election proofing reports from EMS.**

   Covered in EMS EED training and Accumulation only EMS training
4. **Preparing necessary election media from EMS for use in the proposed PPS, CSD, and BMD.**

   Covered in EMS EED training and Accumulation only EMS training
5. **Preparing and testing equipment for Absentee by Mail scanning, Absentee In-person voting, Election Day use, and Provisional scanning.**

   Covered in hardware training for the specific equipment. We also encourage using county rovers and or pollworkers to assist with logic and accuracy testing. This gives those election day workers the opportunity to become more familiar with the equipment
6. **Configuring and sealing equipment for Absentee by Mail scanning, Absentee In-person voting, Election Day use, and Provisional scanning.**

   Covered in hardware training for the specific equipment. We also encourage using county rovers and or pollworkers to assist with logic and accuracy testing. This gives those election day workers the opportunity to become more familiar with the equipment
7. **Absentee In-Person voting equipment opening and closing procedures (PPS, BMD, EPoll).**

   Covered in Pollworker training, rover training and throughout logic and accuracy testing
8. **Election Day equipment opening and closing procedures (PPS, BMD, EPoll).**

   Covered in Pollworker training, rover training and throughout logic and accuracy testing
9. **Polling scanning procedures.**

   Covered in Pollworker training, rover training and throughout logic and accuracy testing
10. **Central scanning procedures.**

   Covered in ICC and Adjudication training

11. Transitioning equipment from Absentee In-person voting use to Election Day use.

Covered in rover training and ICX training

12. Basic equipment troubleshooting, while in use.

Covered in Pollworker training, rover training and throughout logic and accuracy testing

13. Removing and securing collected ballots and removable media.

Covered in Pollworker training, rover training and throughout logic and accuracy testing

14. Recovering archived data from internal memory (PPS, EPoll, and CSD).

Covered in EMS EED and Accumulation only EMS training

15. Uploading removable media to EMS.

Covered in RTR training

16. Producing tabulation reports from EMS.

Covered in RTR training

17. Generating export files from EMS for Election Night Reporting (ENR).

Covered in RTR training

18. Preparing post-election documentation from EMS.

Covered in EMS EED and Accumulation only EMS training and RTR training

19. Preparing finalized copy of election results from EMS for delivery to GASOS for certification.

Covered in RTR training

20. Conducting recounts.

Basic recount training covered in EMS EED and Accumulation only EMS training.

21. Conducting post-election audits.

Covered in EMS EED and Accumulation only EMS training, specific curriculum would be developed with the state to coincide with audit procedures used in the state.

22. Proper storage and maintenance of all SVS components.

Covered in hardware specific training

Although we have existing curriculum designed to cover each topic detailed above, we look forward to working with the State of Georgia, and individual Counties, to customize lessons, delivery methods, and materials to meet all of your needs.

KNOWiNK

KNOWiNK will provide the State with a variety of training materials for EPoll including step by step user guides and checklists, videos, a Powerpoint created specifically for the State, and additional supplemental tools utilized for training; and, will at minimum, contain training related to all of the above requirements. Sample documentation provided to a county customer who also uses Dominion Voting systems is attached in Section 18.

Clarification Question

Per the Questions and Answers Suppliers were requested to provide a high level in depth training plan and documentation for GASOS staff on the setup and use of the proposed EMS in creating and configuring election databases for use in Georgia elections and primaries. In reference to: Section I. Implementation Plan of the Background and Scope of Work:

Phase 1 will be the full inventory distribution and necessary training of up to ten (10) counties selected by GASOS to participate in a pilot project to be executed in November 2019. The pilot equipment will be used in any associated November 2019 election scheduled for the selected counties.

Phase 2 will be broken into two parts. Phase 2 – Part 1 will be distributing a minimum of five (5) BMD, two (2) PPS, and one (1) EMS computer to each county (159). These components will facilitate election official and poll worker training activities. Phase 2 – Part 2 will be the full distribution of all equipment to the counties including training. Phase 2 – Parts 1 and 2 will begin after the distribution of equipment to the counties participating in the scheduled pilot project in November 2019.

Completion of Phase 2 – Part 1 will be completed by end of the fourth quarter of 2019 (December 31, 2019). Completion of Phase 2 – Part 2 will be completed prior to the end of the first quarter of 2020 (March 31, 2020).

Georgia Implementation Training Plan

The following is an in-depth training plan as requested and is submitted with the understanding that training dates and training content are subject to change pending award of the contract and the outcome of collaboration with the GASOS/County Election Officials.

Pre-Training Tasks

2 Days: 7/16 to 7/17 - Meeting with GASOS and GASOS-selected County Election Officials to customize training documentation, syllibi, demonstration project and ballots to reflect GA election procedures and terminology.

18 Days: 7/15 to 8/1 - Customized training documentation, syllibi, demonstration project and ballot development.

8 Days: 8/2 to 8/9 - GASOS review and approval of final training documentation, syllibi, demonstration project and ballot and set/confirm the training schedule.

Phase 1 Training Plan

GASOS – 8/12 to 8/23 – 10 Days

- Election Programming – 4 1/2 Days
- DSuite Administrator and User – 2 Days
- ICX-BMD/ICP Operator – 1 Day
- ICC/ADJ Administration – 1 Day
- ICC/ADJ Operator – ½ Day
- UOCAVA – 1 Day

Counties – Administrative/User – 8/26 to 9/9 – 2 Regional Trainings - 4 Days Each

- DSuite Administrator and User – 2 Days
- ICC/ADJ Administration – 1 Day
- UOCAVA – 1 Day

Counties – Operator/Pollworker – 9/10 to 9/13 – 2 Regional Trainings - 2 Days Each

- ICX-BMD/ICP Operator – 1 Day
- ICC/ADJ Operator – ½ Day
- Pollworker Train the Trainer – ½ Day

Phase 2 Training Plan

Counties not holding December Runoff Election

Counties – Administrative/User – 11/11 to 12/13 – Regional Trainings - 4 Days Each

- DSuite Administrator and User – 2 Days
- ICC/ADJ Administration – 1 Day
- UOCAVA – 1 Day

Counties – Operator/Pollworker – 11/11 to 12/13 – Regional Trainings - 2 Days Each

- ICX-BMD/ICP Operator – 1 Day
- ICC/ADJ Operator – ½ Day
- Pollworker Train the Trainer – ½ Day

Counties holding December Runoff Election

Counties – Administrative/User – 12/9/2019 to 1/17/2020 – Regional Trainings - 4 Days Each

- DSuite Administrator and User – 2 Days
- ICC/ADJ Administration – 1 Day
- UOCAVA – 1 Day

Counties – Operator/Pollworker – 12/9/2019 to 1/17/2020 – Regional Trainings - 2 Days Each

- ICX-BMD/ICP Operator – 1 Day
- ICC/ADJ Operator – ½ Day
- Pollworker Train the Trainer – ½ Day

Courses

DSuite Election Programming – 5 Days

- Democracy Suite Election Programming Software Overview
- Template (Master) Election Project Concepts
- Election Programming Phases
- Introduction to Election Event Designer
- Working with Election Projects – Manual Project Build
- Election Project Definition – Primary and General Elections
- Divisioning – Districts, Precincts, and Elector and Ballot Groups
- Election Event – Contests and Candidates
- Localization – Language Management
- User Management
- Advancing to Election Project Styling
- Ballot Styling and Templates
- Translations – Single and Multiple Language
- Creating the Ballots and Audio Ballot Files
- Previewing Audio Ballot Files
- Creating Electronic Ballot Headers
- Tabulation Setup
- Preparing Proofing Packages
- Create Election (Tabulator) Files
- Create Final Project Backup for Transfer to County
- Advanced Functions – Creating Template (Master) Projects and Using Election Data Translator for Import/Export of Election Definition Data

DSuite Administrator and User – 2 ½ Days

- Introduction to Democracy Suite
    - Democracy Suite Software Component Overview
    - Tabulator Systems Overview
        - ImageCast Precinct Ballot Scanner – ICP
        - ImageCast X-Ballot Marking Device – ICX-BMD
        - ImageCast Central – ICC
    - Review of Quick Reference Guides
    - Additional System Components
    - Consumable Items
    - Voting System Process Overview
    - Generic Election Timeline and Workflow Responsibilities Review
- The Election Proofing Process
    - Overview of the County Proofing Process
    - The Election Proofing Package
    - Proofing Ballots
    - Proofing Reports
    - Proofing Audio Ballot Files
- Election Preparation
    - Election Event Designer – EED – Programming the Tabulators
    - Setting Up ImageCast Central – ICC
    - Setting Up Adjudication
- Logic and Accuracy Testing
    - Testing Steps Overview
    - Test Deck Overview
    - Logic and Accuracy Test Procedures
        - ICX-BMD/ICP
        - ICC with Adjudication
        - RTR
- Results Talley and Reporting - RTR
    - Overview of RTR
    - Opening an Election in RTR
    - RTR Settings
    - Loading Election Results
    - Managing Results Files and Tabulators in RTR
    - Manual Entry of Results
    - Results Reporting and Exporting
    - Exporting Results Manually
- Backing up the Final Results
- Purging Test Results

ICC/ADJ Administration – 1 Day

- Overview of ICC and ADJ Functionality
- Setting Up the ICC – Loading the Tabulator Files and Scanner Configuration
- Setting Up RTR to Manage, Monitor and Automatically Upload Results From ICC/ADJ
- Setting Up Adjudication – Loading the Election and Setting Conditions
- Logic and Accuracy Testing
- Ballot Handling
    - Scanning Ballots and Common problems
    - Batch Handling
        - Rejecting and Resetting batches
        - Deleting Batches
- Adjudicating Ballots
    - Standard User Vs. Administrative User
    - Ballot Overlays
    - Ballot Review and AuditMark
    - Write-in Resolution
    - Submitting Batches
    - Managing Quarantined Ballots
    - Configuring and Managing Report Profiles

UOCAVA – 1 Day

- Configuring UOCAVA
    - Display
    - Language Management
    - Voter ID and PIN Options
- Tabulator Management
    - Importing Election Files
    - Configuring Parameters
- Download Administration
    - Editing the Ballot Package
    - Cover Sheet, Affidavit, and Return Envelope Settings
    - Security Question Administration
- User Management
- Customization
    - Logos
    - Color Schemes
- Voter List Management
- Accessibility
- Testing
- Reporting

ICX-BMD/ICP Operator – 1 Day

- ICP Operations
    - Hardware Overview
    - Loading/Changing Paper Tape
    - Loading the Memory Cards
    - Acceptance Testing
    - Maintenance and Troubleshooting
- ICX-BMD Operations
    - Hardware Overview
    - Loading Paper and Toner in the BMD Printer
    - Loading Election Files
    - Acceptance Testing
    - Maintenance and Troubleshooting
- Logic and Accuracy Testing
    - Test Decks and Vote Sims
- Voting Equipment in the Polling Place
    - Setting up the Equipment
    - Opening the Polls
    - Activating Voter Cards
    - Voting on the ICX-BMD/ICP
    - Closing the polling place

ICC/ADJ Operator – ½ Day

- Ballot Handling
    - Scanning Ballots and Common problems
    - Batch Handling
        - Rejecting, Resetting, and Deleting Batches
- Adjudicating Ballots
    - Ballot Overlays
    - Ballot Review and AuditMark
    - Write-in Resolution
    - Quarantining Ballots

Pollworker Train the Trainer – ½ Day

- Training Techniques
- Learning Styles
- Presentation Skills
- Voting Equipment in the Polling Place
    - Setting up the Equipment
    - Opening the Polls
    - Activating Voter Cards
    - Voting on the ICX-BMD/ICP
    - Troubleshooting
    - Closing the Polls

Section 12 – Project Management and Program Support

File 12-4 Deploy 1

12.4 Provide a roll-out plan for deploying all components of the proposed SVS to the GASOS for up to 10 local jurisdictions for use in November 2019 elections by August 1, 2019. Reference Attachment O - Potential Equipment Distribution.

Dominion

Dominion has provided a lengthy narrative describing the proposed Implementation Plan. Please refer to the Plan located in response to File 12-1.

In essence, Dominion will secure a facility in Atlanta proper conveniently located to the new GASOS offices by July 1, 2019. The kick off meeting between the GASOS and Dominion will be scheduled as soon as the contract award is finalized.

Delivery of all system components as defined for the pilot counties in Attachment O. will be received at the Dominion facility in late July. Acceptance Testing of all devices and software will begin with the GASOS staff on-site working hand in hand with the Dominion technicians.

As Acceptance Testing is completed we will schedule delivery to the respective counties. At that time, we will have agreed to the training curriculum with GASOS to be provided to the counties and their poll workers. As the training classes are being scheduled at the county level, Dominion's coding staff will begin the process of building ballots for the pilot counties.

The ballot building process will be done in concert with the GASOS staff ultimately responsible for the county database coding post contract. Working closely with the Dominion coding staff will serve as an excellent exposure and knowledge transfer vehicle to enhance the EMS training to be provided to the GASOS staff after the November election per our Plan time line.

Absentee Ballots will ultimately be printed either in house on the Dominion Remote Ballot Printing system or the files will be sent to a ballot printer.

Dominion will perform the L&A process at each county and use that opportunity to expose the county staff to the requirements and procedures as to how to conduct L&A tasks in the future. Absentee and UOCAVA ballots will be mailed on time.

Poll worker training classes will be conducted, and Advanced Voting and Election Day support plans and staffing will be put in place.

The counties will have a County technician on-site and each County will have a set of Election Day rovers on so-site as well depending the number of polls to be active.

KNOWiNK

KNOWiNK's project plan provided in 12-1 PM Time includes a roll-out plan to deploy all components of the ePollbook for use in November 2019 elections by August 1, 2019. Per Attachment O – Potential Equipment Distribution, the project plan reflects the number of ePollbooks and jurisdictions deploying for use in November 2019 elections. We recommend the GASOS use the detailed project plan provided for Statewide management of the electronic poll book roll-out by phases.

Clarification Question

Please describe the dependencies and assurances to meet the commitments proposed for: Phase 1 will be the full inventory distribution and necessary training of up to ten (10) counties selected by GASOS to participate in a pilot project to be executed in November 2019. The pilot equipment will be used in any associated November 2019 election scheduled for the selected counties.

Dominion

Dominion will establish a warehouse operation close to the new GASOS offices. The Dominion facility will open in early July right after contract award and signing is complete. We will receive the first shipment of voting system products and components in late July for acceptance testing and deployment to the twelve Pilot Counties starting in August 2019. The July shipment to the Dominion facility will include at a minimum:

- 1,559 BMD's
- 158 PPS's
- 15 CSD's
- 334 ePoll Books
- 17 EMS licenses and servers.

Acceptance testing will begin immediately and coordinated with the GASOS staff that will be involved in the acceptance testing process.

Dominion will continue to receive voting system products and components monthly in August through mid-December 2019.

The training and installation of the new system for the 12 pilot counties will begin in August on dates agreeable to the counties selected for the November pilot. GASOS staff will receive initial training as the counties and poll workers are trained. The training curriculum and suggested time frames are provided in detail in the appropriate sections of the Dominion clarification responses.

KNOWiNK

KNOWiNK will ship 334 complete Poll Pad kits to the Dominion warehouse for acceptance testing and distribution to the pilot counties to coincide with the shipment of Dominion equipment in July.

There are little to no dependencies on KNOWiNK to provide the Poll Pad hardware since it is commercial-off-the-shelf.

Section 12 – Project Management and Program Support

File 12-5 Deploy 2

12.5 Provide a roll-out plan for deploying of a representative sample of equipment for each county by December 2019. Reference Attachment O - Potential Equipment Distribution.

Dominion

Dominion’s Implementation Plan is available for review in its entirety in response to File 12-1. Insights into the efforts we will undertake to exceed the representative sample of voting system components as detailed in Attachment O are included in the plan.

In essence, Dominion plans to receive voting system products in our Atlanta facility beginning in August 2019 in quantities sufficient to allow Acceptance Testing to be performed on a monthly basis. As a result of this concept, Dominion will be able to delivery a full set of equipment to the counties starting immediately after the November election is completed by following a systematic delivery schedule. We have the option to deliver the sample quantities as defined in Attachment O or to exceed those quantities by delivering a full set of items to each county.

To accommodate the counties ability to receive the new system components at one time, we have included a decommissioning process to be conducted by a Georgia firm that specializes in decommissioning equipment within the state. This process will take care to follow all federal, state and local regulations regarding disposal and recycling as applicable, as well as ensuring the secure and complete destruction of any information related to privacy and security.

The final decision to deliver per the sample concept or delivery all at one time to each county will be negotiated with the GASOS in the project planning stages following contract award.

KNOWiNK

KNOWiNK's project plan provided in 12-1 PM Time includes a roll-out plan to deploy a representative sample of equipment to each county by December 2019. Per Attachment O – Potential Equipment Distribution, the project plan reflects the number of ePollbooks and jurisdictions deploying for Phase 2 – Part 1. We recommend the GASOS use the detailed project plan provided for Statewide management of the electronic poll book roll-out by phases.

Clarification Question

Please describe the dependencies and assurances to meet the commitments proposed for: Completion of Phase 2 – Part 1 will be completed by end of the fourth quarter of 2019 (December 31, 2019). Completion of Phase 2 – Part 2 will be completed prior to the end of the first quarter of 2020 (March 31, 2020).

Dominion

Dominion's Implementation Plan will be in full operational mode in August 2019. This means the Dominion staff assigned to the various tasks such as acceptance testing, onsite repairs, server configuration and testing, establishment of regional training sites, recruitment of subcontractors, training of county technicians, rover training, poll worker and staff training curriculums developed, and a host of other tasks will be in full force.

Approximately 20% of the new system products and components will begin arriving each month starting in August and continue through mid-December 2019. Acceptance testing will begin immediately upon receipt of product and deployment schedules developed for delivery of Phase 2 – Part 1 and Phase 2 – Part 2. Dominion is committed to delivery ahead of the schedule (completion in mid-January 2020) posted to insure a full statewide system is in place and all training completed in time to use the new system in the PPP election in March. Our planning and focus are based on that premise.

If the intent is to use the new system statewide for the March PPP election, we must mitigate the risk of an unsuccessful experience by delivering and training ahead of the published schedule. If delivery dates per the statement "Completion of Phase 2 – Part 2 will be completed prior to the end of the first quarter of 2020 (March 31, 2020)" represents the GASOS intent, the March PPP will not be ready for a statewide roll out and use of the new system in March 2020. The SAFE Commission made it clear a statewide usage of the new system will be ready to use in the March PPP election. Dominion is committed to make that a reality by adopting an aggressive Implementation Plan and Training schedule.

KNOWiNK has proposed shipping ePoll Books hardware on the following dates, but is happy to adjust the hardware shipment times upon request by the GASOS:

- Phase 2 – Part 1, October 2019: 369 Poll Pads
- Phase 2 – Part 2, November-December 2019: 7,047 Poll Pads

KNOWiNK has an 11,000 square foot warehouse and dedicated warehouse manager and team to kit the Poll Pad ePoll Books, load the software, test the kits, and ship to the Dominion warehouse in Georgia for customer acceptance testing and distribution to Georgia counties. Like Dominion, KNOWiNK is also committed to complete delivery of the ePoll Books ahead of schedule (completion in mid-January 2020).

As evidence of KNOWiNK's capability to meet the GASOS equipment delivery requirements, we configured and shipped 5,000 Poll Pad units to Minnesota in a two-month period in 2018. We have already had discussions with vendors in KNOWiNK's supply chain and have confirmed availability of all hardware needed for the quantities needed by GASOS and other existing and prospective customers.

Section 16 – Supply Chain Continuity

File 16-1 Supply Chain

16.1 Describe your measures in place and commitments to assure availability of products, components, software, services, and other deliverables for possible length of contract with renewals (15+ years). Describe whether second sourcing of generic or proprietary products is available or could be obtained by the GASOS or counties in the event of a failure or disruption in supply by the Supplier; price protection available to assure reasonable market prices for the life of the contract; and options available for services or upgrades from independent service organizations (if any) authorized or licensed by Supplier.

Dominion

Dominion utilizes a variety of extensive forecasting activities, product road mapping and the stocking of required inventory to ensure the availability of products, components, software services and other deliverables including the Commercially-Available-Off-the-Shelf hardware for our customers. Dominion maintains warehouses in San Leandro, CA, Jamestown, NY and McKinney, TX. Dominion will also occupy and operate a launch and support facility in the Metro Atlanta area, conveniently located to the new GASOS facility on Interstate North Parkway in the 175 corridor. The facility will house the inventory of equipment and software which will permit Acceptance Testing to be performed in an efficient and timely manner. We intend to establish an internal Depot Repair department to immediately address any issues during Acceptance Testing and to address issues that arise during the initial warranty period. The facility will provide space to house the Project team members, product specialists and subcontractor partners to help provide all services to the State of Georgia.

These long-term supply models are developed through a number of different techniques which include, but are not limited to:

- The purchasing and monitoring of safety stock inventories to permit the fast response to customer requests on active material. Forecasts based on historical and projected fallout rates are developed for each potential replacement part to determine the appropriate inventory stocking level.
- Last time buys for end-of-life materials stocking are generated by analyzing historical fallout rates to determine appropriate purchase levels through the life of the product as well as appropriate succession planning for next generation material.
- Quarterly Business Reviews are held with strategic partners which includes the manufacturers of ImageCast third-party Commercial-Off-the-Shelf components (printers, scanners, displays, laptop, servers, modems, etc.). This strategic

alliance ensures a seamless supply chain transition as products develop from generation to generation.

- Detailed product road mapping activities are reviewed on a monthly basis both internally and externally to assess lines of supply. These activities ensure that Dominion has proactive transition plans which include:
    - Access to a new and developing products to permit the early testing and succession planning as well as backward compatibility.
    - Advanced purchasing opportunities for new product or end-of-life materials to ensure component availability.
    - Development and training of Dominion personnel for repair activity which includes analysis of component stocking levels for potential replacement inventory.
    - Implementation of Dominion Quality Standards at Georgia Elections sits in advance of product supply to ensure quality standards are met and don't adversely affect supply.
    - A consistent and methodical review of supply lines for each product.
    - Audits, completed by Dominion personnel, on each production build to ensure outgoing quality levels comply to company's standards.

KNOWiNK

KNOWiNK will keep stock of inventory to repair, replace or upgrade all non-electronic Poll Pad accessories throughout life of contract (payment may be required to repair/replace/upgrade certain items). Replacement of electronic hardware such as iPads, printers or wireless hotspots with identical models are subject to availability by manufacturer (payment may be required to repair/replace/upgrade certain items). Updates to software will be available throughout the life of the contract.

Certain accessories and consumables (e.g. iPad stands, stylus pens, cases, receipt paper) can be purchased separately from KNOWiNK, as long as these items work in conjunction and do not interfere with the operation of the Poll Pad software.

Throughout the life of the contract, all prices on additional software licenses and additional or upgraded equipment & accessories will be quoted by KNOWiNK before any purchase. KNOWiNK will strive to keep prices on all software, equipment & accessories reasonable and competitive within the electronic poll book industry.

Any service organization would need to be authorized by KNOWiNK to provide services in connection to the Poll Pad software; and KNOWiNK is the sole source provider of updates to the Poll Pad software.

Clarification Question

How long does the equipment last? Will the equipment be available for the life of the contract? If the equipment becomes obsolete what is the proposed plan for continuity.

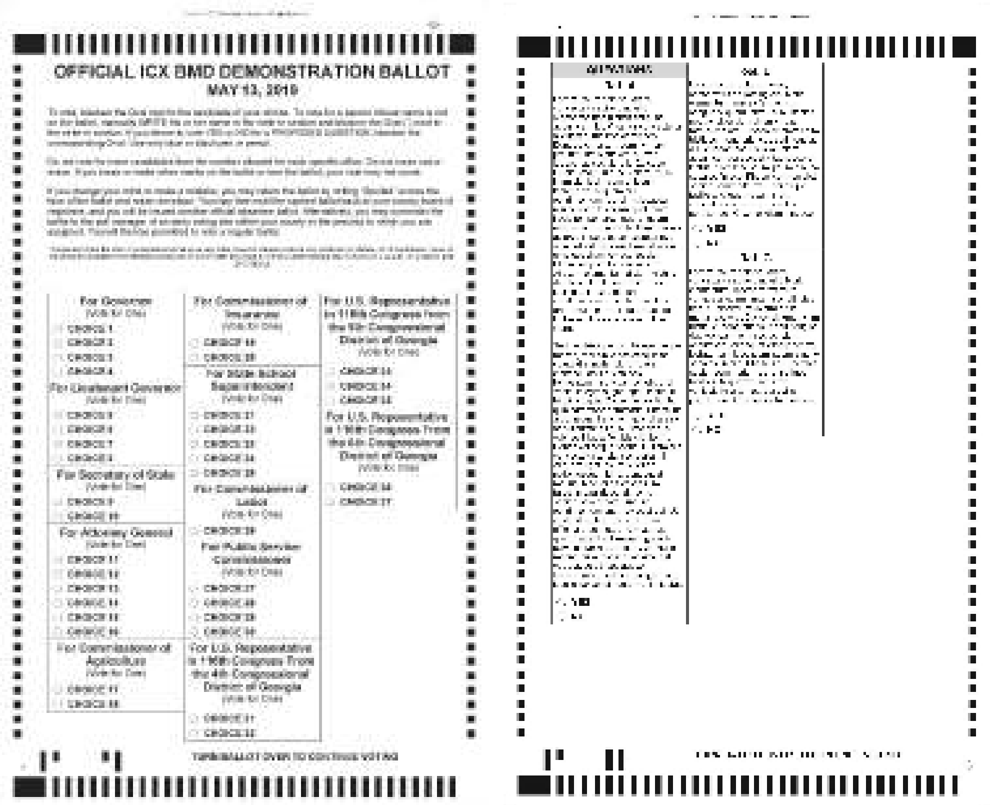
Dominion

The equipment is designed to last for the length of the contract and including its renewal years. Since the majority of the equipment are COTS devices, the version upgrades made by the manufacturers of like equipment will be certified as replacements.

Dominion mitigates the risk concerning proprietary hardware with our partnerships with our manufacturers. Our partnership allows us to provide product availability for 10+ years. Our manufacturers along with our development staff continuously identify any end of life concerns and recertifies any parts with State and Federal certification authorities.

Based on the State's license agreement, all certified software improvements, enhancements, bug fixes and/or updates are available as detailed in the Standard License Agreement.

Dominion announces the option for our customers to elect either the BMD ballot with the voter's choices recapped in a bar code OR printing a full-size ballot from the BMD printer that does not contain any bar code but is an actual full-size ballot that contains the voter's choices. When printed, the ballot looks exactly like the full-size ballots marked by mail-in absentee voters or voters requesting a hand marked paper ballot at the polls. A sample of the BMD ballot without a bar code is attached below. This feature will be offered as a no cost upgrade once certification is complete at the EAC.



OFFICIAL ICX BMD DEMONSTRATION BALLOT
MAY 13, 2019

For Governor (Vote for One)

For Lieutenant Governor (Vote for One)

For Secretary of State (Vote for One)

For Attorney General (Vote for One)

For Commissioner of Agriculture (Vote for One)

For Commissioner of Insurance (Vote for One)

For State School Superintendent (Vote for One)

For Commissioner of Labor (Vote for One)

For Public Service Commissioner (Vote for One)

For U.S. Representative in 116th Congress From the 4th Congressional District of Georgia (Vote for One)

For U.S. Representative in 116th Congress From the 5th Congressional District of Georgia (Vote for One)

TURN BALLOT OVER TO CONTINUE VOTING

Georgia will have ongoing visibility as to which future version of Democracy Suite will include any Georgia-specific upgrades or updates; Dominion will devise an upgrade plan as required by the State.

The proposed voting system is supported by Dominion for the duration of the agreement with the State, including the initial two years on the original warranty, with an eight-year extension, plus for the 10 year annual extensions..

Dominion is constantly working with Commercial off the Shelf equipment providers, such as Canon, Avalue and Dell, to ensure visibility regarding end-of-life components and available replacements. This is done in conjunction with managing ongoing state and federal certification campaigns, to ensure that Democracy Suite remains fully operational and available to customers. Where possible Dominion strives to integrate any new product offerings and enhancements to the currently certified system version to prevent having to replace certain infrastructure components.

Dominion understands that election officials need to ensure that the significant investment required to upgrade a voting system is made with confidence and peace of mind that the technology will keep up with changing requirements and public expectations. Dominion's development team is continually working on refining existing products and functionality, leading to annual federal certification campaigns with the EAC, as well as state certifications where required.

KNOWiNK

KNOWiNK equipment is also designed to last for the length of the contract. However, the iPads may require a refresh in years seven or eight but may last for the 10-year contract term. We recommend the refresh in year seven or eight because, after several years, Apple has historically stopped updating the iOS on the older iPad models which may affect KNOWiNK's ability to update the Poll Pad application to use new features.

All equipment proposed for KNOWiNK's Poll Pad solution will be available for the life of the contract. In the unlikely event equipment were to become obsolete, KNOWiNK will notify the GASOS and provide information on replacement equipment that is of similar quality and function.

DOMINION VOTING

Our customers come first.

Georgia Secretary of State

Request for Supplemental Technical Response: Statewide Voting System

RFP No.: 47800-SOS0000037

Prepared for:	Georgia Secretary of State Attn: Verneicher Favors, Agency Procurement Officer
Address:	vfavors@sos.ga.gov
Prepared by:	Barry Herron, Regional Sales Manager
Email:	Barry.Herron@dominionvoting.com
Phone:	419.350.8455
Due Date:	June 24, 2019, 5:00PM EST

Cover Letter

June 24, 2019

Dear Ms. Favors:

Dominion Voting Systems, Inc. (Dominion) was extremely honored to be invited to participate in the Initial Round of Negotiations held last Tuesday, June 18, 2019, and to receive the Supplemental Questions forthcoming from that session. We have consistently represented Dominion in a professional and responsible manner since the receipt of the original RFP. It is in that light that we respond to the Technical and Cost Worksheet and Narrative Supplemental questions.

It is clear that the State of Georgia Secretary of State is looking for a partner that understands the issues that lie ahead, both technical and political. Dominion has professed that we are the only voting system company that possesses the skill, the expertise, the technical product footprint, and the media outreach knowledge to be your partner through whatever the future holds. Our RFP responses reflect the professional and responsible tone we believe the State is seeking. Our participation in and observance of the SAFE Committee and Election legislation debates, made us acutely aware a true partner was needed in Georgia.

The supplemental responses that follow further indicate the fact that Dominion is proposing a fairly priced, but at the same time a comprehensive solution, to take the State of Georgia to new heights in the voting system arena. Every future vote cast will have a paper document (ballot) from which recounts may be conducted, audits may be performed, and overall voter confidence will be restored. Dominion's system offers unprecedented audit tools to verify and record voter intent accurately. We are constantly improving and enhancing the voting system from customer input received. Your new system will continually evolve and never become stagnant. You will consistently be made aware of what others are doing and why new features may be of interest or beneficial to Georgia.

We understand the responses to follow may elicit new questions, which we welcome, but the responses do provide greater clarity on key items outstanding after last Tuesday's negotiations. We show where the ImageCast X tablet, with a Ballot Marking Device (BMD) printer and as an Direct Recordable Electronic (DRE) with a voter verifiable paper audit trail (VVPAT) system are in use nation-wide. The ImageCast X product is becoming the product of choice all across the country and the list is growing rapidly. We have described a polling place set up for how the system may be deployed. We have explained in greater simplicity than previously just how HASH validation maybe performed and lastly, we have reconfirmed our ability to deliver all voting system products by December 31, 2019. To ensure a successful March 24, 2020, Presidential Preference Primary, all products must be delivered and acceptance tested by the end of the year to allow for sufficient time for staff and poll worker training.

Additionally, we reviewed the pricing by item and made some further concessions to our overall system price while remaining firm on the customer service aspect of our solution. Dominion's reputation is based on historically superb customer service. The key to the deployment and having a successful March 24, 2020, election is based on a quality deployment plan and one that invests heavily in training and customer support. These two facets must be taken seriously and not wavered from.

Thank you again for having a sincere interest in Dominion being the State of Georgia's next voting system PARTNER. A great long term partnership is about to be formed.

Regards,

Barry Herron, Regional Sales Manager
DOMINION VOTING
1201 18th Street Suite 210, Denver, CO 80202
(419) 350-8455
Barry.Herron@DominionVoting.com

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Supplemental Technical Response

Question #1

Confirm which jurisdictions utilize the Ballot Marking Device solution proposed for Georgia. Include how many devices are provided to each jurisdiction and how long the solution has been operational in the jurisdiction.

Dominion's proposed solution of the ImageCast X Ballot Marking Device (BMD) has been successfully implemented and utilized in jurisdictions throughout the United States. The unit is highly scalable to meet the needs of large and small jurisdictions simply by assigning an appropriate number of units based on expected throughput.

The ImageCast X is a versatile unit that can meet the needs of jurisdictions requiring printed paper ballots, the BMD configuration as is being proposed for the State of Georgia, as well as jurisdictions utilizing Direct Recordable Electronic (DRE) configuration, which is backed by a Voter Verifiable Paper Audit Trail (VVPAT).

In either configuration, the main driving component is the ImageCast X tablet. In an effort to demonstrate the successful implementation and use of the ImageCast X, we have provided two tables below separately detailing the use of the ImageCast X BMD configuration and DRE-VVPAT configuration in jurisdictions throughout the United States. We would be happy to provide additional information or explanation upon request.

State	Jurisdiction	Year Implemented	ICX w/BMD
CA	Butte County	2018	45
CA	Contra Costa County	2017	400
CA	El Dorado County	2019	55
CA	Fresno County	2019	1
CA	Inyo County	2017	10
CA	Madera County	2017	45
CA	Marin County	2019	120
CA	Mariposa County	2018	23
CA	Napa County	2017	40
CA	Placer County	2019	275
CA	Sacramento County	2018	366
CA	San Benito County	2017	35
CA	San Luis Obispo County	2017	3

State	Jurisdiction	Year Implemented	ICX w/BMD
CA	San Mateo County	2019	500
CA	Sonoma County	2018	225
CA	Ventura County	2018	950
CO	Arapahoe County	2018	120
CO	Boulder County	2017	39
CO	Denver City & County	2018	30
CO	El Paso County	2018	90
CO	Jefferson County	2018	70
CO	Larimer County	2018	136
CO	Lincoln County	2017	2
CO	Mineral County	2019	1
CO	Montrose County	2018	12
CO	Rio Blanco County	2018	3
CO	Teller County	2018	2
IL	Cook County	2018	4,453
IL	Election Works	2018	1
KS	Cheyenne County	2018	2
KS	Elk County	2018	4
KS	Ford County	2017	50
KS	Graham County	2017	6
KS	Hamilton County	2019	3
KS	Haskell County	2017	3
KS	Hodgeman County	2018	3
KS	Jackson County	2017	10
KS	Logan County	2019	4
KS	Reno County	2017	55
KS	Rice County	2018	7
KS	Rooks County	2018	16
KS	Sheridan County	2019	2
KS	Stanton County	2017	4
KS	Stevens County	2019	6
KS	Thomas County	2017	10
LA	Louisiana State	2019	700
MI	Ada Township (Kent County)	2017	4
MI	Adams Township (Arenac County)	2018	1
MI	Adrian City (Lenawee County)	2017	1
MI	Adrian Township (Lenawee County)	2017	1
MI	Aetna Township (Mecosta County)	2017	1
MI	Aetna Township (Missaukee County)	2017	2
MI	Akron Township (Tuscola County)	2017	2

State	Jurisdiction	Year Implemented	ICX w/BMD
MI	Alabaster Township (Iosco County)	2017	1
MI	Alaiedon Township (Ingham County)	2017	1
MI	Albee Township (Saginaw County)	2018	1
MI	Albert Township (Montmorency County)	2018	1
MI	Albion City (Calhoun County)	2017	3
MI	Albion Township (Calhoun County)	2017	1
MI	Alcona County	2018	1
MI	Alcona Township (Alcona County)	2018	1
MI	Algansee Township (Branch County)	2017	1
MI	Alger County	2017	10
MI	Algoma Township (Kent County)	2017	3
MI	Allegan City (Allegan County)	2018	1
MI	Allegan County	2017	2
MI	Allegan Township (Allegan County)	2018	1
MI	Allis Township (Presque Isle County)	2018	1
MI	Allouez Township (Keweenaw County)	2018	1
MI	Alma City (Gratiot County)	2017	3
MI	Almena Township (Van Buren County)	2017	1
MI	Almer Township (Tuscola County)	2017	1
MI	Almira Township (Benzie County)	2018	1
MI	Almont Township (Lapeer County)	2017	2
MI	Aloha Township (Cheboygan County)	2018	1
MI	Alpena City (Alpena County)	2018	4
MI	Alpena County	2018	1
MI	Alpena Township (Alpena County)	2018	5
MI	Alpine Township (Kent County)	2017	6
MI	Antioch Township (Wexford County)	2018	1
MI	Antrim County	2018	1
MI	Antwerp Township (Van Buren County)	2017	3
MI	Arbela Township (Tuscola County)	2017	1
MI	Arcada Township (Gratiot County)	2017	1
MI	Arcadia Township (Lapeer County)	2017	2
MI	Arcadia Township (Manistee County)	2017	1
MI	Arenac County	2018	1
MI	Arenac Township (Arenac County)	2018	1
MI	Argyle Township (Sanilac County)	2017	1
MI	Arlington Township (Van Buren County)	2017	1
MI	Arvon Township (Baraga County)	2018	1
MI	Ash Township (Monroe County)	2017	2
MI	Ashland Township (Newaygo County)	2017	1

State	Jurisdiction	Year Implemented	ICX w/BMD
MI	Assyria Township (Barry County)	2018	1
MI	Athens Township (Calhoun County)	2017	1
MI	Attica Township (Lapeer County)	2017	1
MI	Au Gres City (Arenac County)	2018	1
MI	Au Gres Township (Arenac County)	2018	1
MI	Au Sable Township (Iosco County)	2017	1
MI	Aurelius Township (Ingham County)	2017	1
MI	Austin Township (Mecosta County)	2017	1
MI	Austin Township (Sanilac County)	2017	1
MI	Avery Township (Montmorency County)	2018	1
MI	Bad Axe City (Huron County)	2017	1
MI	Bagley Township (Otsego County)	2017	1
MI	Bainbridge Township (Berrien County)	2017	1
MI	Baldwin Township (Iosco County)	2017	1
MI	Baltimore Township (Barry County)	2018	1
MI	Bangor City (Van Buren County)	2017	1
MI	Bangor Township (Van Buren County)	2017	1
MI	Banks Township (Antrim County)	2018	1
MI	Baraga County	2018	1
MI	Baraga Township (Baraga County)	2018	3
MI	Baroda Township (Berrien County)	2017	1
MI	Barry County	2018	1
MI	Barry Township (Barry County)	2018	2
MI	Barton Township (Newaygo County)	2017	1
MI	Batavia Township (Branch County)	2017	1
MI	Bates Township (Iron County)	2018	1
MI	Battle Creek City (Calhoun County)	2017	11
MI	Bay Mills Township (Chippewa County)	2018	1
MI	Bay Township (Charlevoix County)	2017	1
MI	Bear Lake Township (Manistee County)	2017	1
MI	Bearinger Township (Presque Isle County)	2018	1
MI	Beaugrand Township (Cheboygan County)	2018	1
MI	Beaver Creek Township (Crawford County)	2018	1
MI	Beaver Township (Newaygo County)	2017	1
MI	Beaverton City (Gladwin County)	2017	1
MI	Beaverton Township (Gladwin County)	2017	1
MI	Bedford Township (Calhoun County)	2017	4
MI	Bedford Township (Monroe County)	2017	10
MI	Belknap Township (Presque Isle County)	2018	1
MI	Benona Township (Oceana County)	2018	1

State	Jurisdiction	Year Implemented	ICX w/BMD
MI	Bentley Township (Gladwin County)	2017	1
MI	Benton Harbor City (Berrien County)	2017	4
MI	Benton Township (Berrien County)	2017	5
MI	Benton Township (Cheboygan County)	2018	1
MI	Benzie County	2018	1
MI	Benzonia Township (Benzie County)	2018	1
MI	Bergland Township (Ontonagon County)	2018	1
MI	Berlin Township (Monroe County)	2017	4
MI	Berrien County	2017	1
MI	Berrien Township (Berrien County)	2017	1
MI	Bertrand Township (Berrien County)	2017	1
MI	Bessemer City (Gogebic County)	2018	1
MI	Bessemer Township (Gogebic County)	2018	1
MI	Bethany Township (Gratiot County)	2017	1
MI	Bethel Township (Branch County)	2017	1
MI	Big Creek Township (Oscoda County)	2018	1
MI	Big Prairie Township (Newaygo County)	2017	1
MI	Big Rapids City (Mecosta County)	2017	3
MI	Big Rapids Township (Mecosta County)	2017	1
MI	Billings Township (Gladwin County)	2017	1
MI	Bingham Township (Huron County)	2017	1
MI	Bingham Township (Leelanau County)	2018	1
MI	Birch Run Township (Saginaw County)	2018	1
MI	Bismarck Township (Presque Isle County)	2018	1
MI	Blackman Charter Township (Jackson County)	2017	4
MI	Blaine Township (Benzie County)	2018	1
MI	Blissfield Township (Lenawee County)	2017	1
MI	Bloomfield Township (Huron County)	2017	1
MI	Bloomfield Township (Missaukee County)	2017	1
MI	Bloomingdale Township (Van Buren County)	2017	1
MI	Blue Lake Township (Kalkaska County)	2018	1
MI	Blumfield Township (Saginaw County)	2018	1
MI	Bohemia Township (Ontonagon County)	2018	1
MI	Bois Blanc Township (Mackinac County)	2017	1
MI	Boon Township (Wexford County)	2018	1
MI	Bourret Township (Gladwin County)	2017	1
MI	Bowne Township (Kent County)	2017	1
MI	Boyne City (Charlevoix County)	2017	1
MI	Boyne Valley Township (Charlevoix County)	2017	1
MI	Brady Township (Saginaw County)	2018	1

State	Jurisdiction	Year Implemented	ICX w/BMD
MI	Branch County	2017	1
MI	Brant Township (Saginaw County)	2018	1
MI	Breen Township (Dickinson County)	2018	1
MI	Breitung Township (Dickinson County)	2018	3
MI	Brevort Township (Mackinac County)	2017	1
MI	Bridgehampton Township (Sanilac County)	2017	1
MI	Bridgeport Township (Saginaw County)	2018	4
MI	Bridgeton Township (Newaygo County)	2017	1
MI	Bridgman City (Berrien County)	2017	1
MI	Briley Township (Montmorency County)	2018	1
MI	Bronson City (Branch County)	2017	1
MI	Bronson Township (Branch County)	2017	1
MI	Brookfield Township (Huron County)	2017	1
MI	Brooks Township (Newaygo County)	2017	1
MI	Brown City (Sanilac County)	2017	1
MI	Brown Township (Manistee County)	2017	1
MI	Bruce Township (Chippewa County)	2018	1
MI	Buchanan City (Berrien County)	2017	2
MI	Buchanan Township (Berrien County)	2017	1
MI	Buckeye Township (Gladwin County)	2017	2
MI	Buel Township (Sanilac County)	2017	1
MI	Buena Vista Township (Saginaw County)	2018	3
MI	Bunker Hill Township (Ingham County)	2017	1
MI	Burdell Township (Osceola County)	2018	1
MI	Burleigh Township (Iosco County)	2017	1
MI	Burlington Township (Calhoun County)	2017	1
MI	Burlington Township (Lapeer County)	2017	1
MI	Burnside Township (Lapeer County)	2017	1
MI	Burr Oak Township (St Joseph County)	2017	1
MI	Burt Township (Cheboygan County)	2018	1
MI	Burtchville Township (St Clair County)	2018	1
MI	Butler Township (Branch County)	2017	1
MI	Butman Township (Gladwin County)	2017	1
MI	Butterfield Township (Missaukee County)	2017	1
MI	Byron Township (Kent County)	2017	8
MI	Cadillac City (Wexford County)	2018	3
MI	Caldwell Township (Missaukee County)	2017	1
MI	Caledonia Township (Alcona County)	2018	1
MI	Caledonia Township (Kent County)	2017	5
MI	Calhoun County	2017	1

State	Jurisdiction	Year Implemented	ICX w/BMD
MI	California Township (Branch County)	2017	1
MI	Calvin Township (Cass County)	2017	1
MI	Cambridge Township (Lenawee County)	2017	1
MI	Cannon Township (Kent County)	2017	5
MI	Carlton Township (Barry County)	2018	1
MI	Caro City (Tuscola County)	2017	4
MI	Carp Lake Township (Ontonagon County)	2018	2
MI	Carrollton Township (Saginaw County)	2018	2
MI	Cascade Township (Kent County)	2017	10
MI	Casco Township (Allegan County)	2018	1
MI	Case Township (Presque Isle County)	2018	1
MI	Caseville City (Huron County)	2017	1
MI	Caseville Township (Huron County)	2017	1
MI	Caspian City (Iron County)	2018	1
MI	Cass County	2017	1
MI	Castleton Township (Barry County)	2018	1
MI	Cedar Creek Township (Wexford County)	2018	1
MI	Cedar Springs City (Kent County)	2017	1
MI	Cedar Township (Osceola County)	2018	1
MI	Centerville Township (Leelanau County)	2018	1
MI	Central Lake Township (Antrim County)	2018	1
MI	Champion Township (Marquette County)	2017	1
MI	Chandler Township (Charlevoix County)	2017	1
MI	Chandler Township (Huron County)	2017	1
MI	Chapin Township (Saginaw County)	2018	1
MI	Charlevoix City (Charlevoix County)	2017	1
MI	Charlevoix County	2017	1
MI	Charlevoix Township (Charlevoix County)	2017	1
MI	Charlton Township (Otsego County)	2017	1
MI	Chase Township (Lake County)	2018	1
MI	Cheboygan City (Cheboygan County)	2018	1
MI	Cheboygan County	2018	1
MI	Cherry Grove Township (Wexford County)	2018	1
MI	Cherry Valley Township (Lake County)	2018	1
MI	Chesaning Township (Saginaw County)	2018	2
MI	Cheshire Township (Allegan County)	2018	1
MI	Chester Township (Otsego County)	2017	1
MI	Chestonia Township (Antrim County)	2018	1
MI	Chikaming Township (Berrien County)	2017	1
MI	Chippewa County	2018	1

State	Jurisdiction	Year Implemented	ICX w/BMD
MI	Chippewa Township (Chippewa County)	2018	1
MI	Chippewa Township (Mecosta County)	2017	1
MI	Chocolay Township (Marquette County)	2017	2
MI	Churchill Township (Ogemaw County)	2018	1
MI	Clam Lake Township (Wexford County)	2018	1
MI	Clam Union Township (Missaukee County)	2017	1
MI	Clare County	2017	19
MI	Clarence Township (Calhoun County)	2017	1
MI	Clarendon Township (Calhoun County)	2017	1
MI	Clark Township (Mackinac County)	2017	1
MI	Clay Township (St Clair County)	2017	4
MI	Claybanks Township (Oceana County)	2018	1
MI	Clayton Township (Arenac County)	2018	1
MI	Clement Township (Gladwin County)	2017	1
MI	Cleon Township (Manistee County)	2017	1
MI	Cleveland Township (Leelanau County)	2018	1
MI	Clinton Township (Lenawee County)	2017	1
MI	Clinton Township (Oscoda County)	2018	1
MI	Clyde Township (Allegan County)	2018	1
MI	Coldwater City (Branch County)	2017	1
MI	Coldwater Township (Branch County)	2017	1
MI	Coleman City (Midland County)	2017	1
MI	Colfax Township (Benzie County)	2018	1
MI	Colfax Township (Huron County)	2017	1
MI	Colfax Township (Mecosta County)	2017	1
MI	Colfax Township (Oceana County)	2018	1
MI	Colfax Township (Wexford County)	2018	1
MI	Coloma City (Berrien County)	2017	1
MI	Coloma Township (Berrien County)	2017	1
MI	Colon Township (St Joseph County)	2017	1
MI	Columbia Township (Jackson County)	2017	2
MI	Columbia Township (Tuscola County)	2017	1
MI	Columbia Township (Van Buren County)	2017	1
MI	Columbus Township (Luce County)	2017	1
MI	Comins Township (Oscoda County)	2018	1
MI	Concord Township (Jackson County)	2017	1
MI	Constantine Township (St Joseph County)	2017	1
MI	Convis Township (Calhoun County)	2017	1
MI	Corwith Township (Otsego County)	2017	1
MI	Courtland Township (Kent County)	2017	3

State	Jurisdiction	Year Implemented	ICX w/BMD
MI	Covert Township (Van Buren County)	2017	1
MI	Covington Township (Baraga County)	2018	1
MI	Crawford County	2018	1
MI	Croswell City (Sanilac County)	2017	1
MI	Croton Township (Newaygo County)	2017	1
MI	Crystal Falls City (Iron County)	2018	1
MI	Crystal Falls Township (Iron County)	2018	1
MI	Crystal Lake Township (Benzie County)	2018	1
MI	Crystal Township (Oceana County)	2018	1
MI	Cumming Township (Ogemaw County)	2018	1
MI	Curtis Township (Alcona County)	2018	1
MI	Custer Township (Antrim County)	2018	1
MI	Custer Township (Sanilac County)	2017	1
MI	Dafter Township (Chippewa County)	2018	1
MI	Dayton Township (Newaygo County)	2017	1
MI	Dayton Township (Tuscola County)	2017	1
MI	Dearborn City (Wayne County)	2017	31
MI	Dearborn Heights City (Wayne County)	2017	19
MI	Decatur Township (Van Buren County)	2017	1
MI	Deep River Township (Arenac County)	2018	1
MI	Deerfield Township (Lapeer County)	2017	2
MI	Deerfield Township (Lenawee County)	2017	1
MI	Deerfield Township (Mecosta County)	2017	1
MI	Delaware Township (Sanilac County)	2017	1
MI	Delhi Township (Ingham County)	2017	7
MI	Delta County	2017	22
MI	Denmark Township (Tuscola County)	2017	5
MI	Denver Township (Newaygo County)	2017	1
MI	DeTour Township (Chippewa County)	2018	1
MI	Detroit City (Wayne County)	2017	235
MI	Dickinson County	2018	1
MI	Dickson Township (Manistee County)	2017	1
MI	Dorr Township (Allegan County)	2018	2
MI	Douglas City (Allegan County)	2018	1
MI	Dover Township (Lake County)	2018	1
MI	Dover Township (Lenawee County)	2017	1
MI	Dover Township (Otsego County)	2017	1
MI	Dowagiac City (Cass County)	2017	1
MI	Doyle Township (Schoolcraft County)	2017	1
MI	Drummond Township (Chippewa County)	2018	1

State	Jurisdiction	Year Implemented	ICX w/BMD
MI	Dryden Township (Lapeer County)	2017	2
MI	Dundee Township (Monroe County)	2017	1
MI	Dwight Township (Huron County)	2017	1
MI	Eagle Harbor Township (Keweenaw County)	2018	1
MI	East Grand Rapids City (Kent County)	2017	6
MI	East Jordan City (Charlevoix County)	2017	1
MI	East Lansing City (Ingham County)	2017	15
MI	East Tawas City (Iosco County)	2017	1
MI	Echo Township (Antrim County)	2018	1
MI	Eckford Township (Calhoun County)	2017	1
MI	Eden Township (Lake County)	2018	1
MI	Edenville Township (Midland County)	2017	1
MI	Edwards Township (Ogemaw County)	2018	1
MI	Elba Township (Gratiot County)	2017	1
MI	Elba Township (Lapeer County)	2017	6
MI	Elbridge Township (Oceana County)	2018	1
MI	Elk Rapids Township (Antrim County)	2018	1
MI	Elk Township (Lake County)	2018	1
MI	Elk Township (Sanilac County)	2017	1
MI	Elkland Township (Tuscola County)	2017	2
MI	Ellington Township (Tuscola County)	2017	1
MI	Ellis Township (Cheboygan County)	2018	1
MI	Ellsworth Township (Lake County)	2018	1
MI	Elmer Township (Oscoda County)	2018	1
MI	Elmer Township (Sanilac County)	2017	1
MI	Elmira Township (Otsego County)	2017	1
MI	Elmwood Township (Leelanau County)	2018	2
MI	Elmwood Township (Tuscola County)	2017	3
MI	Ely Township (Marquette County)	2017	1
MI	Emerson Township (Gratiot County)	2017	1
MI	Emmett Township (Calhoun County)	2017	2
MI	Empire Township (Leelanau County)	2018	1
MI	Ensley Township (Newaygo County)	2017	1
MI	Enterprise Township (Missaukee County)	2017	1
MI	Erie Township (Monroe County)	2017	2
MI	Erwin Township (Gogebic County)	2018	1
MI	Evangeline Township (Charlevoix County)	2017	1
MI	Evart City (Osceola County)	2018	1
MI	Evart Township (Osceola County)	2018	1
MI	Eveline Township (Charlevoix County)	2017	1

State	Jurisdiction	Year Implemented	ICX w/BMD
MI	Everett Township (Newaygo County)	2017	1
MI	Evergreen Township (Sanilac County)	2017	2
MI	Ewing Township (Marquette County)	2017	1
MI	Exeter Township (Monroe County)	2017	2
MI	Fabius Township (St Joseph County)	2017	1
MI	Fairfield Township (Lenawee County)	2017	1
MI	Fairgrove Township (Tuscola County)	2017	1
MI	Fairhaven Township (Huron County)	2017	1
MI	Fawn River Township (St Joseph County)	2017	1
MI	Felch Township (Dickinson County)	2018	1
MI	Fennville City (Allegan County)	2018	1
MI	Ferry Township (Oceana County)	2018	1
MI	Filer Township (Manistee County)	2017	1
MI	Fillmore Township (Allegan County)	2018	1
MI	Florence Township (St Joseph County)	2017	1
MI	Flowerfield Township (St Joseph County)	2017	1
MI	Flynn Township (Sanilac County)	2017	1
MI	Forest Home Township (Antrim County)	2018	1
MI	Forest Township (Cheboygan County)	2018	1
MI	Forest Township (Missaukee County)	2017	1
MI	Forester Township (Sanilac County)	2017	1
MI	Fork Township (Mecosta County)	2017	1
MI	Forsyth Township (Marquette County)	2017	3
MI	Fort Gratiot Township (St Clair County)	2017	5
MI	Foster Township (Ogemaw County)	2018	1
MI	Frankenmuth City (Saginaw County)	2018	1
MI	Frankenmuth Township (Saginaw County)	2018	1
MI	Frankfort City (Benzie County)	2018	1
MI	Franklin Township (Lenawee County)	2017	1
MI	Frederic Township (Crawford County)	2018	1
MI	Fredonia Township (Calhoun County)	2017	1
MI	Fremont City (Newaygo County)	2017	2
MI	Fremont Township (Saginaw County)	2018	1
MI	Fremont Township (Sanilac County)	2017	1
MI	Fremont Township (Tuscola County)	2017	2
MI	Frenchtown Township (Monroe County)	2017	7
MI	Fulton Township (Gratiot County)	2017	1
MI	Gaastra City (Iron County)	2018	1
MI	Gaines Township (Kent County)	2017	6
MI	Galien Township (Berrien County)	2017	1

State	Jurisdiction	Year Implemented	ICX w/BMD
MI	Ganges Township (Allegan County)	2018	1
MI	Garfield Township (Mackinac County)	2017	2
MI	Garfield Township (Newaygo County)	2017	1
MI	Gaylord City (Otsego County)	2017	1
MI	Geneva Township (Midland County)	2017	1
MI	Geneva Township (Van Buren County)	2017	1
MI	Germfask Township (Schoolcraft County)	2017	1
MI	Gilead Township (Branch County)	2017	1
MI	Gilford Township (Tuscola County)	2017	2
MI	Gilmore Township (Benzie County)	2018	1
MI	Girard Township (Branch County)	2017	1
MI	Gladwin City (Gladwin County)	2017	2
MI	Gladwin County	2017	1
MI	Gladwin Township (Gladwin County)	2017	1
MI	Glen Arbor Township (Leelanau County)	2018	1
MI	Gobles City (Van Buren County)	2017	1
MI	Gogebic County	2018	1
MI	Golden Township (Oceana County)	2018	1
MI	Goodar Township (Ogemaw County)	2018	1
MI	Goodland Township (Lapeer County)	2017	1
MI	Goodwell Township (Newaygo County)	2017	1
MI	Gore Township (Huron County)	2017	1
MI	Grand Rapids City (Kent County)	2017	70
MI	Grand Rapids Township (Kent County)	2017	9
MI	Grandville City (Kent County)	2017	7
MI	Grant City (Newaygo County)	2017	1
MI	Grant Township (Cheboygan County)	2018	1
MI	Grant Township (Huron County)	2017	1
MI	Grant Township (Iosco County)	2017	1
MI	Grant Township (Keweenaw County)	2018	1
MI	Grant Township (Mecosta County)	2017	1
MI	Grant Township (Newaygo County)	2017	1
MI	Grant Township (Oceana County)	2018	1
MI	Grass Lake Township (Jackson County)	2017	3
MI	Gratiot County	2017	2
MI	Grattan Township (Kent County)	2017	2
MI	Grayling City (Crawford County)	2018	1
MI	Grayling Township (Crawford County)	2018	2
MI	Green Township (Alpena County)	2018	1
MI	Green Township (Mecosta County)	2017	1

State	Jurisdiction	Year Implemented	ICX w/BMD
MI	Greenbush Township (Alcona County)	2018	1
MI	Greendale Township (Midland County)	2017	1
MI	Greenland Township (Ontonagon County)	2018	1
MI	Greenleaf Township (Sanilac County)	2017	1
MI	Greenwood Township (Oceana County)	2018	1
MI	Greenwood Township (Oscoda County)	2018	1
MI	Greenwood Township (Wexford County)	2018	1
MI	Grim Township (Gladwin County)	2017	1
MI	Grosse Pointe City (Wayne County)	2017	1
MI	Grosse Pointe Farms City (Wayne County)	2017	5
MI	Grosse Pointe Shores City (Wayne County)	2017	1
MI	Grosse Pointe Woods City (Wayne County)	2017	6
MI	Grout Township (Gladwin County)	2017	1
MI	Gunplain Township (Allegan County)	2018	1
MI	Gustin Township (Alcona County)	2018	1
MI	Hadley Township (Lapeer County)	2017	2
MI	Hagar Township (Berrien County)	2017	1
MI	Haight Township (Ontonagon County)	2018	1
MI	Hamilton Township (Gratiot County)	2017	1
MI	Hamilton Township (Van Buren County)	2017	1
MI	Hamtramck City (Wayne County)	2017	6
MI	Hanover Township (Jackson County)	2017	2
MI	Hanover Township (Wexford County)	2018	1
MI	Harbor Beach City (Huron County)	2017	1
MI	Haring Township (Wexford County)	2018	1
MI	Harper Woods City (Wayne County)	2017	4
MI	Harrisville City (Alcona County)	2018	1
MI	Harrisville Township (Alcona County)	2018	1
MI	Hart City (Oceana County)	2018	1
MI	Hart Township (Oceana County)	2018	1
MI	Hartford City (Van Buren County)	2017	1
MI	Hartford Township (Van Buren County)	2017	1
MI	Hartwick Township (Osceola County)	2018	1
MI	Hastings City (Barry County)	2018	2
MI	Hastings Township (Barry County)	2018	1
MI	Hawes Township (Alcona County)	2018	1
MI	Hay Township (Gladwin County)	2017	1
MI	Hayes Township (Charlevoix County)	2017	1
MI	Hayes Township (Otsego County)	2017	1
MI	Haynes Township (Alcona County)	2018	1

State	Jurisdiction	Year Implemented	ICX w/BMD
MI	Heath Township (Allegan County)	2018	1
MI	Hebron Township (Cheboygan County)	2018	1
MI	Helena Township (Antrim County)	2018	1
MI	Hematite Township (Iron County)	2018	1
MI	Henderson Township (Wexford County)	2018	1
MI	Hendricks Township (Mackinac County)	2017	1
MI	Henrietta Township (Jackson County)	2017	1
MI	Hersey Township (Osceola County)	2018	1
MI	Hiawatha Township (Schoolcraft County)	2017	1
MI	Highland Township (Osceola County)	2018	1
MI	Hill Township (Ogemaw County)	2018	1
MI	Hillman Township (Montmorency County)	2018	1
MI	Hinton Township (Mecosta County)	2017	1
MI	Holland Township (Missaukee County)	2017	1
MI	Home Township (Newaygo County)	2017	1
MI	Homer Township (Calhoun County)	2017	1
MI	Homer Township (Midland County)	2017	1
MI	Homestead Township (Benzie County)	2018	1
MI	Hope Township (Barry County)	2018	1
MI	Hope Township (Midland County)	2017	1
MI	Hopkins Township (Allegan County)	2018	1
MI	Horton Township (Ogemaw County)	2018	1
MI	Houghton County	2017	32
MI	Houghton Township (Keweenaw County)	2018	1
MI	Howard Township (Cass County)	2017	2
MI	Hudson City (Lenawee County)	2017	1
MI	Hudson Township (Charlevoix County)	2017	1
MI	Hudson Township (Lenawee County)	2017	1
MI	Hudson Township (Mackinac County)	2017	2
MI	Hulbert Township (Chippewa County)	2018	1
MI	Humboldt Township (Marquette County)	2017	1
MI	Hume Township (Huron County)	2017	1
MI	Huron County	2017	1
MI	Huron Township (Huron County)	2017	1
MI	Huron Township (Wayne County)	2017	5
MI	Ida Township (Monroe County)	2017	1
MI	Imlay City (Lapeer County)	2017	1
MI	Imlay Township (Lapeer County)	2017	1
MI	Indianfields Township (Tuscola County)	2017	1
MI	Ingersoll Township (Midland County)	2017	1

State	Jurisdiction	Year Implemented	ICX w/BMD
MI	Ingham County	2017	1
MI	Ingham Township (Ingham County)	2017	2
MI	Inkster City (Wayne County)	2017	9
MI	Inland Township (Benzie County)	2018	1
MI	Interior Township (Ontonagon County)	2018	1
MI	Inverness Township (Cheboygan County)	2018	1
MI	Inwood Township (Schoolcraft County)	2017	1
MI	Iosco County	2017	1
MI	Iron County	2018	1
MI	Iron Mountain City (Dickinson County)	2018	2
MI	Iron River City (Iron County)	2018	1
MI	Iron River Township (Iron County)	2018	1
MI	Ironwood City (Gogebic County)	2018	1
MI	Ironwood Township (Gogebic County)	2018	1
MI	Irving Township (Barry County)	2018	2
MI	Isabella County	2017	27
MI	Ishpeming City (Marquette County)	2017	2
MI	Ishpeming Township (Marquette County)	2017	1
MI	Ithaca City (Gratiot County)	2017	1
MI	Jackson City (Jackson County)	2017	7
MI	Jackson County	2017	1
MI	James Township (Saginaw County)	2018	1
MI	Jasper Township (Midland County)	2017	1
MI	Jefferson Township (Cass County)	2017	1
MI	Jerome Township (Midland County)	2017	1
MI	Johnstown Township (Barry County)	2018	2
MI	Jonesfield Township (Saginaw County)	2018	1
MI	Jordan Township (Antrim County)	2018	1
MI	Joyfield Township (Benzie County)	2018	1
MI	Juniata Township (Tuscola County)	2017	1
MI	Kalkaska County	2017	13
MI	Kasson Township (Leelanau County)	2018	1
MI	Kearney Township (Antrim County)	2018	1
MI	Keeler Township (Van Buren County)	2017	1
MI	Kent County	2017	1
MI	Kentwood City (Kent County)	2017	14
MI	Keweenaw County	2018	1
MI	Kinderhook Township (Branch County)	2017	1
MI	Kingsford City (Dickinson County)	2018	2
MI	Kingston Township (Tuscola County)	2017	2

State	Jurisdiction	Year Implemented	ICX w/BMD
MI	Kinross Township (Chippewa County)	2018	1
MI	Klacking Township (Ogemaw County)	2018	1
MI	Kochville Township (Saginaw County)	2018	1
MI	Koehler Township (Cheboygan County)	2018	1
MI	Koylton Township (Tuscola County)	2017	2
MI	Krakow Township (Presque Isle County)	2018	1
MI	La Grange Township (Cass County)	2017	1
MI	La Salle Township (Monroe County)	2017	2
MI	Lafayette Township (Gratiot County)	2017	1
MI	Lake City (Missaukee County)	2017	1
MI	Lake County	2018	1
MI	Lake Township (Benzie County)	2018	1
MI	Lake Township (Berrien County)	2017	1
MI	Lake Township (Huron County)	2017	1
MI	Lake Township (Lake County)	2018	1
MI	Lake Township (Missaukee County)	2017	1
MI	Lakefield Township (Luce County)	2017	1
MI	Lakefield Township (Saginaw County)	2018	1
MI	Laketown Township (Allegan County)	2018	2
MI	Lamotte Township (Sanilac County)	2017	1
MI	Lanse Township (Baraga County)	2018	1
MI	Lansing City (Ingham County)	2017	35
MI	Lansing Township (Ingham County)	2017	4
MI	Lapeer City (Lapeer County)	2017	4
MI	Lapeer County	2017	1
MI	Lapeer Township (Lapeer County)	2017	2
MI	Larkin Township (Midland County)	2017	2
MI	Lawrence Township (Van Buren County)	2017	1
MI	Le Roy Township (Osceola County)	2018	1
MI	Leavitt Township (Oceana County)	2018	1
MI	Lee Township (Allegan County)	2018	1
MI	Lee Township (Calhoun County)	2017	1
MI	Lee Township (Midland County)	2017	1
MI	Leelanau County	2018	1
MI	Leelanau Township (Leelanau County)	2018	1
MI	Leighton Township (Allegan County)	2018	1
MI	Leland Township (Leelanau County)	2018	1
MI	Lenawee County	2017	2
MI	Leoni Township (Jackson County)	2017	3
MI	Leonidas Township (St Joseph County)	2017	1

State	Jurisdiction	Year Implemented	ICX w/BMD
MI	Leroy Township (Calhoun County)	2017	1
MI	Leroy Township (Ingham County)	2017	2
MI	Leslie City (Ingham County)	2017	1
MI	Leslie Township (Ingham County)	2017	1
MI	Lexington Township (Sanilac County)	2017	1
MI	Liberty Township (Jackson County)	2017	2
MI	Liberty Township (Wexford County)	2018	1
MI	Lilley Township (Newaygo County)	2017	1
MI	Lincoln Charter Township (Berrien County)	2017	6
MI	Lincoln Township (Arenac County)	2018	1
MI	Lincoln Township (Huron County)	2017	1
MI	Lincoln Township (Midland County)	2017	1
MI	Lincoln Township (Newaygo County)	2017	1
MI	Lincoln Township (Osceola County)	2018	1
MI	Livingston Township (Otsego County)	2017	1
MI	Livonia City (Wayne County)	2017	18
MI	Locke Township (Ingham County)	2017	1
MI	Lockport Township (St Joseph County)	2017	1
MI	Logan Township (Ogemaw County)	2018	1
MI	London Township (Monroe County)	2017	1
MI	Long Rapids Township (Alpena County)	2018	1
MI	Loud Township (Montmorency County)	2018	1
MI	Lovells Township (Crawford County)	2018	1
MI	Lowell City (Kent County)	2017	1
MI	Lowell Township (Kent County)	2017	1
MI	Luce County	2017	1
MI	Luna Pier City (Monroe County)	2017	1
MI	Mackinac County	2017	1
MI	Mackinac Island City (Mackinac County)	2017	1
MI	Mackinaw Township (Cheboygan County)	2018	1
MI	Macon Township (Lenawee County)	2017	1
MI	Madison Township (Lenawee County)	2017	1
MI	Mancelona Township (Antrim County)	2018	1
MI	Manistee City (Manistee County)	2017	2
MI	Manistee County	2017	1
MI	Manistee Township (Manistee County)	2017	1
MI	Manistique City (Schoolcraft County)	2017	2
MI	Manistique Township (Schoolcraft County)	2017	1
MI	Manlius Township (Allegan County)	2018	1
MI	Mansfield Township (Iron County)	2018	2

State	Jurisdiction	Year Implemented	ICX w/BMD
MI	Manton City (Wexford County)	2018	1
MI	Maple Forest Township (Crawford County)	2018	1
MI	Maple Grove Township (Barry County)	2018	1
MI	Maple Grove Township (Manistee County)	2017	1
MI	Maple Grove Township (Saginaw County)	2018	1
MI	Maple Ridge Township (Alpena County)	2018	1
MI	Maple Valley Township (Sanilac County)	2017	1
MI	Marathon Township (Lapeer County)	2017	2
MI	Marcellus Township (Cass County)	2017	1
MI	Marengo Township (Calhoun County)	2017	1
MI	Marenisco Township (Gogebic County)	2018	1
MI	Marilla Township (Manistee County)	2017	1
MI	Marion Township (Charlevoix County)	2017	1
MI	Marion Township (Osceola County)	2018	1
MI	Marion Township (Saginaw County)	2018	1
MI	Marion Township (Sanilac County)	2017	1
MI	Marlette City (Sanilac County)	2017	1
MI	Marlette Township (Sanilac County)	2017	1
MI	Marquette City (Marquette County)	2017	3
MI	Marquette County	2017	1
MI	Marquette Township (Mackinac County)	2017	1
MI	Marquette Township (Marquette County)	2017	2
MI	Marshall City (Calhoun County)	2017	1
MI	Marshall Township (Calhoun County)	2017	1
MI	Martin Township (Allegan County)	2018	1
MI	Martiny Township (Mecosta County)	2017	1
MI	Marysville City (St Clair County)	2017	5
MI	Mason City (Ingham County)	2017	2
MI	Mason Township (Arenac County)	2018	1
MI	Mason Township (Cass County)	2017	1
MI	Mastodon Township (Iron County)	2018	2
MI	Matchwood Township (Ontonagon County)	2018	1
MI	Matteson Township (Branch County)	2017	1
MI	Mayfield Township (Lapeer County)	2017	2
MI	Mcbain City (Missaukee County)	2017	1
MI	Mckinley Township (Huron County)	2017	1
MI	McMillan Township (Luce County)	2017	1
MI	Mcmillan Township (Ontonagon County)	2018	1
MI	Meade Township (Huron County)	2017	1
MI	Mecosta County	2017	1

State	Jurisdiction	Year Implemented	ICX w/BMD
MI	Mecosta Township (Mecosta County)	2017	1
MI	Medina Township (Lenawee County)	2017	1
MI	Melrose Township (Charlevoix County)	2017	1
MI	Mendon Township (St Joseph County)	2017	1
MI	Menominee County	2017	17
MI	Mentor Township (Cheboygan County)	2018	1
MI	Mentor Township (Oscoda County)	2018	1
MI	Meridian Township (Ingham County)	2017	19
MI	Merrill Township (Newaygo County)	2017	1
MI	Metamora Township (Lapeer County)	2017	2
MI	Metz Township (Presque Isle County)	2018	1
MI	Michigamme Township (Marquette County)	2017	1
MI	Michigan Department of State	2017	1
MI	Middle Branch Township (Osceola County)	2018	1
MI	Midland City (Midland County)	2017	16
MI	Midland County	2017	1
MI	Midland Township (Midland County)	2017	1
MI	Mikado Township (Alcona County)	2018	1
MI	Milan Township (Monroe County)	2017	1
MI	Millbrook Township (Mecosta County)	2017	1
MI	Millen Township (Alcona County)	2018	1
MI	Millington Township (Tuscola County)	2017	2
MI	Mills Township (Midland County)	2017	1
MI	Mills Township (Ogemaw County)	2018	1
MI	Milton Township (Antrim County)	2018	1
MI	Milton Township (Cass County)	2017	1
MI	Minden Township (Sanilac County)	2017	1
MI	Missaukee County	2017	1
MI	Mitchell Township (Alcona County)	2018	1
MI	Moffatt Township (Arenac County)	2018	1
MI	Moltke Township (Presque Isle County)	2018	1
MI	Monroe City (Monroe County)	2017	6
MI	Monroe County	2017	1
MI	Monroe Township (Monroe County)	2017	3
MI	Monroe Township (Newaygo County)	2017	1
MI	Monterey Township (Allegan County)	2018	1
MI	Montmorency County	2018	1
MI	Montmorency Township (Montmorency County)	2018	2
MI	Moore Township (Sanilac County)	2017	1
MI	Moran Township (Mackinac County)	2017	1

State	Jurisdiction	Year Implemented	ICX w/BMD
MI	Morenci City (Lenawee County)	2017	1
MI	Morton Township (Mecosta County)	2017	2
MI	Mottville Township (St Joseph County)	2017	1
MI	Mount Haley Township (Midland County)	2017	1
MI	Mueller Township (Schoolcraft County)	2017	1
MI	Mullett Township (Cheboygan County)	2018	1
MI	Munro Township (Cheboygan County)	2018	1
MI	Napoleon Township (Jackson County)	2017	2
MI	Negaunee City (Marquette County)	2017	2
MI	Negaunee Township (Marquette County)	2017	1
MI	Nelson Township (Kent County)	2017	2
MI	New Buffalo City (Berrien County)	2017	1
MI	New Buffalo Township (Berrien County)	2017	1
MI	New Haven Township (Gratiot County)	2017	1
MI	Newark Township (Gratiot County)	2017	1
MI	Newaygo City (Newaygo County)	2017	1
MI	Newaygo County	2017	1
MI	Newberg Township (Cass County)	2017	1
MI	Newfield Township (Oceana County)	2018	1
MI	Newkirk Township (Lake County)	2018	1
MI	Newton Township (Calhoun County)	2017	1
MI	Newton Township (Mackinac County)	2017	1
MI	Niles City (Berrien County)	2017	3
MI	Niles Township (Berrien County)	2017	10
MI	Noble Township (Branch County)	2017	1
MI	Norman Township (Manistee County)	2017	1
MI	North Allis Township (Presque Isle County)	2018	1
MI	North Branch Township (Lapeer County)	2017	2
MI	North Shade Township (Gratiot County)	2017	1
MI	North Star Township (Gratiot County)	2017	1
MI	Norvell Township (Jackson County)	2017	2
MI	Norway City (Dickinson County)	2018	1
MI	Norway Township (Dickinson County)	2018	1
MI	Norwich Township (Missaukee County)	2017	1
MI	Norwich Township (Newaygo County)	2017	1
MI	Norwood Township (Charlevoix County)	2017	1
MI	Nottawa Township (St Joseph County)	2017	1
MI	Novesta Township (Tuscola County)	2017	1
MI	Nunda Township (Cheboygan County)	2018	1
MI	Oakfield Township (Kent County)	2017	2

State	Jurisdiction	Year Implemented	ICX w/BMD
MI	Oceana County	2018	1
MI	Ocqueoc Township (Presque Isle County)	2018	1
MI	Ogden Township (Lenawee County)	2017	1
MI	Ogemaw County	2018	1
MI	Ogemaw Township (Ogemaw County)	2018	1
MI	Oliver Township (Huron County)	2017	1
MI	Omer City (Arenac County)	2018	1
MI	Onaway (Presque Isle County)	2018	1
MI	Onekama Township (Manistee County)	2017	1
MI	Onondaga Township (Ingham County)	2017	1
MI	Ontonagon County	2018	1
MI	Ontonagon Township (Ontonagon County)	2018	1
MI	Ontwa Township (Cass County)	2017	1
MI	Orangeville Township (Barry County)	2018	1
MI	Oregon Township (Lapeer County)	2017	2
MI	Orient Township (Osceola County)	2018	1
MI	Oronoko Township (Berrien County)	2017	3
MI	Osceola County	2018	1
MI	Osceola Township (Osceola County)	2018	1
MI	Oscoda County	2018	1
MI	Oscoda Township (Iosco County)	2017	1
MI	Ossineke Township (Alpena County)	2018	1
MI	Otsego City (Allegan County)	2018	1
MI	Otsego County	2017	1
MI	Otsego Lake Township (Otsego County)	2017	1
MI	Otsego Township (Allegan County)	2018	1
MI	Otto Township (Oceana County)	2018	1
MI	Overisel Township (Allegan County)	2018	1
MI	Ovid Township (Branch County)	2017	1
MI	Palmyra Township (Lenawee County)	2017	1
MI	Paris Township (Huron County)	2017	1
MI	Park Township (St Joseph County)	2017	1
MI	Parma Township (Jackson County)	2017	1
MI	Paw Township (Van Buren County)	2017	1
MI	Peacock Township (Lake County)	2018	1
MI	Peaine Township (Charlevoix County)	2017	1
MI	Penn Township (Cass County)	2017	1
MI	Pennfield Township (Calhoun County)	2017	3
MI	Pentland Township (Luce County)	2017	1
MI	Pentwater Township (Oceana County)	2018	1

State	Jurisdiction	Year Implemented	ICX w/BMD
MI	Petersburg City (Monroe County)	2017	1
MI	Pickford Township (Chippewa County)	2018	1
MI	Pine Grove Township (Van Buren County)	2017	1
MI	Pine River Township (Gratiot County)	2017	1
MI	Pinora Township (Lake County)	2018	1
MI	Pioneer Township (Missaukee County)	2017	1
MI	Pipestone Township (Berrien County)	2017	1
MI	Plainfield Township (Iosco County)	2017	1
MI	Plainfield Township (Kent County)	2017	11
MI	Plainwell City (Allegan County)	2018	1
MI	Platte Township (Benzie County)	2018	1
MI	Pleasant Plains Township (Lake County)	2018	1
MI	Pleasanton Township (Manistee County)	2017	1
MI	Pointe Aux Barques Township (Huron County)	2017	1
MI	Pokagon Township (Cass County)	2017	1
MI	Port Austin Township (Huron County)	2017	1
MI	Port Huron City (St Clair County)	2017	10
MI	Portage Township (Mackinac County)	2017	1
MI	Porter Township (Cass County)	2017	3
MI	Porter Township (Midland County)	2017	1
MI	Porter Township (Van Buren County)	2017	1
MI	Posen Township (Presque Isle County)	2018	1
MI	Powell Township (Marquette County)	2017	2
MI	Prairieville Township (Barry County)	2018	1
MI	Presque Isle County	2018	1
MI	Presque Isle Township (Presque Isle County)	2018	1
MI	Pulaski Township (Jackson County)	2017	1
MI	Pulawski Township (Presque Isle County)	2018	1
MI	Quincy Township (Branch County)	2017	1
MI	Raber Township (Chippewa County)	2018	1
MI	Raisin Township (Lenawee County)	2017	1
MI	Raisinville Township (Monroe County)	2017	2
MI	Reed City (Osceola County)	2018	1
MI	Reeder Township (Missaukee County)	2017	1
MI	Reno Township (Iosco County)	2017	1
MI	Republic Township (Marquette County)	2017	1
MI	Rich Township (Lapeer County)	2017	1
MI	Richland Township (Missaukee County)	2017	1
MI	Richland Township (Ogemaw County)	2018	1
MI	Richland Township (Saginaw County)	2018	1

State	Jurisdiction	Year Implemented	ICX w/BMD
MI	Richmond Township (Marquette County)	2017	1
MI	Richmond Township (Osceola County)	2018	1
MI	Ridgeway Township (Lenawee County)	2017	1
MI	Riga Township (Lenawee County)	2017	1
MI	Riley Township (St Clair County)	2017	1
MI	Riverside Township (Missaukee County)	2017	1
MI	Rives Township (Jackson County)	2017	2
MI	Rockford City (Kent County)	2017	2
MI	Rockland Township (Ontonagon County)	2018	1
MI	Rogers City (Presque Isle County)	2018	1
MI	Rogers Township (Presque Isle County)	2018	1
MI	Rollin Township (Lenawee County)	2017	1
MI	Rome Township (Lenawee County)	2017	1
MI	Romulus City (Wayne County)	2017	10
MI	Rose City (Ogemaw County)	2018	1
MI	Rose Lake Township (Osceola County)	2018	1
MI	Rose Township (Ogemaw County)	2018	1
MI	Royalton Township (Berrien County)	2017	2
MI	Rubicon Township (Huron County)	2017	1
MI	Rudyard Township (Chippewa County)	2018	2
MI	Rust Township (Montmorency County)	2018	1
MI	Rutland Township (Barry County)	2018	2
MI	Sage Township (Gladwin County)	2017	2
MI	Saginaw City (Saginaw County)	2017	12
MI	Saginaw County	2018	1
MI	Saginaw Township (Saginaw County)	2018	16
MI	Sagola Township (Dickinson County)	2018	2
MI	Saint Joseph City (Berrien County)	2017	3
MI	Saint Joseph Township (Berrien County)	2017	4
MI	Salem Township (Allegan County)	2018	1
MI	Sanborn Township (Alpena County)	2018	1
MI	Sand Beach Township (Huron County)	2017	1
MI	Sands Township (Marquette County)	2017	1
MI	Sandstone Township (Jackson County)	2017	3
MI	Sandusky City (Sanilac County)	2017	3
MI	Sanilac County	2017	1
MI	Sanilac Township (Sanilac County)	2017	2
MI	Sauble Township (Lake County)	2018	1
MI	Saugatuck City (Allegan County)	2018	1
MI	Saugatuck Township (Allegan County)	2018	1

State	Jurisdiction	Year Implemented	ICX w/BMD
MI	Sault Ste Marie City (Chippewa County)	2018	4
MI	Schoolcraft County	2017	1
MI	Sebewaing Township (Huron County)	2017	1
MI	Secord Township (Gladwin County)	2017	2
MI	Selma Township (Wexford County)	2018	1
MI	Seneca Township (Lenawee County)	2017	1
MI	Seney Township (Schoolcraft County)	2017	1
MI	Seville Township (Gratiot County)	2017	1
MI	Shelby Township (Oceana County)	2018	2
MI	Sheridan Township (Calhoun County)	2017	1
MI	Sheridan Township (Huron County)	2017	1
MI	Sheridan Township (Mecosta County)	2017	1
MI	Sheridan Township (Newaygo County)	2017	2
MI	Sherman Township (Gladwin County)	2017	1
MI	Sherman Township (Huron County)	2017	1
MI	Sherman Township (Iosco County)	2017	1
MI	Sherman Township (Keweenaw County)	2018	1
MI	Sherman Township (Newaygo County)	2017	1
MI	Sherman Township (Osceola County)	2018	1
MI	Sherman Township (St Joseph County)	2017	1
MI	Sherwood Township (Branch County)	2017	1
MI	Shiawassee County	2017	27
MI	Sigel Township (Huron County)	2017	1
MI	Silver Creek Township (Cass County)	2017	1
MI	Sims Township (Arenac County)	2018	1
MI	Skandia Township (Marquette County)	2017	1
MI	Slagle Township (Wexford County)	2018	1
MI	Sodus Township (Berrien County)	2017	1
MI	Solon Township (Kent County)	2017	2
MI	Solon Township (Leelanau County)	2018	1
MI	Soo Township (Chippewa County)	2018	2
MI	South Arm Township (Charlevoix County)	2017	1
MI	South Branch Township (Crawford County)	2018	1
MI	South Branch Township (Wexford County)	2018	1
MI	South Haven City (Van Buren County)	2017	1
MI	South Haven Township (Van Buren County)	2017	1
MI	Sparta Township (Kent County)	2017	1
MI	Spaulding Township (Saginaw County)	2018	1
MI	Speaker Township (Sanilac County)	2017	1
MI	Spencer Township (Kent County)	2017	1

State	Jurisdiction	Year Implemented	ICX w/BMD
MI	Spring Arbor Township (Jackson County)	2017	2
MI	Springdale Township (Manistee County)	2017	1
MI	Springfield City (Calhoun County)	2017	2
MI	Springport Township (Jackson County)	2017	1
MI	Springville Township (Wexford County)	2018	1
MI	Spurr Township (Baraga County)	2018	1
MI	St Charles Township (Saginaw County)	2018	2
MI	St Clair County	2017	34
MI	St Ignace City (Mackinac County)	2017	1
MI	St Ignace Township (Mackinac County)	2017	1
MI	St James Township (Charlevoix County)	2017	1
MI	St Joseph County	2017	1
MI	St Louis City (Gratiot County)	2017	1
MI	Stambaugh Township (Iron County)	2018	1
MI	Standish City (Arenac County)	2018	1
MI	Standish Township (Arenac County)	2018	1
MI	Stannard Township (Ontonagon County)	2018	1
MI	Star Township (Antrim County)	2018	1
MI	Stockbridge Township (Ingham County)	2017	1
MI	Stronach Township (Manistee County)	2017	1
MI	Sturgis City (St Joseph County)	2017	1
MI	Sturgis Township (St Joseph County)	2017	1
MI	Sugar Island Township (Chippewa County)	2018	1
MI	Summerfield Township (Monroe County)	2017	1
MI	Summit Township (Jackson County)	2017	4
MI	Sumner Township (Gratiot County)	2017	1
MI	Sumpter Township (Wayne County)	2017	4
MI	Superior Township (Chippewa County)	2018	2
MI	Suttons Bay Township (Leelanau County)	2018	1
MI	Swan Creek Township (Saginaw County)	2018	1
MI	Sweetwater Township (Lake County)	2018	1
MI	Sylvan Township (Osceola County)	2018	1
MI	Tawas City (Iosco County)	2017	1
MI	Tawas Township (Iosco County)	2017	1
MI	Taylor City (Wayne County)	2017	13
MI	Taymouth Township (Saginaw County)	2018	1
MI	Tecumseh City (Lenawee County)	2017	3
MI	Tecumseh Township (Lenawee County)	2017	1
MI	Tekonsha Township (Calhoun County)	2017	1
MI	Thomas Township (Saginaw County)	2018	4

State	Jurisdiction	Year Implemented	ICX w/BMD
MI	Thompson Township (Schoolcraft County)	2017	1
MI	Thornapple Township (Barry County)	2018	3
MI	Three Oaks Township (Berrien County)	2017	1
MI	Three Rivers City (St Joseph County)	2017	1
MI	Tilden Township (Marquette County)	2017	1
MI	Tittabawassee Township (Saginaw County)	2018	2
MI	Tobacco Township (Gladwin County)	2017	1
MI	Tompkins Township (Jackson County)	2017	1
MI	Torch Lake Township (Antrim County)	2018	1
MI	Trout Lake Township (Chippewa County)	2018	1
MI	Trowbridge Township (Allegan County)	2018	1
MI	Troy Township (Newaygo County)	2017	1
MI	Turin Township (Marquette County)	2017	1
MI	Turner Township (Arenac County)	2018	1
MI	Tuscarora Township (Cheboygan County)	2018	1
MI	Tuscola County	2017	1
MI	Tuscola Township (Tuscola County)	2017	2
MI	Tyrone Township (Kent County)	2017	1
MI	Union Township (Branch County)	2017	1
MI	Valley Township (Allegan County)	2018	1
MI	Van Buren County	2017	1
MI	Vassar City (Tuscola County)	2017	2
MI	Vassar Township (Tuscola County)	2017	4
MI	Vergennes Township (Kent County)	2017	2
MI	Verona Township (Huron County)	2017	1
MI	Vevay Township (Ingham County)	2017	1
MI	Vienna Township (Montmorency County)	2018	1
MI	Volinia Township (Cass County)	2017	1
MI	Wakefield City (Gogebic County)	2018	1
MI	Wakefield Township (Gogebic County)	2018	1
MI	Walker City (Kent County)	2017	8
MI	Walker Township (Cheboygan County)	2018	1
MI	Warner Township (Antrim County)	2018	1
MI	Warren Township (Midland County)	2017	1
MI	Washington Township (Gratiot County)	2017	1
MI	Washington Township (Sanilac County)	2017	1
MI	Waterloo Township (Jackson County)	2017	1
MI	Watersmeet Township (Gogebic County)	2018	1
MI	Watertown Township (Sanilac County)	2017	1
MI	Watertown Township (Tuscola County)	2017	1

State	Jurisdiction	Year Implemented	ICX w/BMD
MI	Watervliet City (Berrien County)	2017	1
MI	Watervliet Township (Berrien County)	2017	1
MI	Watson Township (Allegan County)	2018	1
MI	Waucedah Township (Dickinson County)	2018	1
MI	Waverly Township (Cheboygan County)	2018	1
MI	Waverly Township (Van Buren County)	2017	1
MI	Wayland City (Allegan County)	2018	1
MI	Wayland Township (Allegan County)	2018	1
MI	Wayne County	2017	173
MI	Wayne Township (Cass County)	2017	1
MI	Weare Township (Oceana County)	2018	1
MI	Webber Township (Lake County)	2018	1
MI	Weesaw Township (Berrien County)	2017	1
MI	Weldon Township (Benzie County)	2018	1
MI	Wellington Township (Alpena County)	2018	1
MI	Wells Township (Marquette County)	2017	1
MI	Wells Township (Tuscola County)	2017	1
MI	West Branch City (Ogemaw County)	2018	2
MI	West Branch Township (Dickinson County)	2018	1
MI	West Branch Township (Marquette County)	2017	1
MI	West Branch Township (Missaukee County)	2017	1
MI	West Branch Township (Ogemaw County)	2018	1
MI	Westland City (Wayne County)	2017	21
MI	Wexford County	2018	1
MI	Wexford Township (Wexford County)	2018	1
MI	Wheatfield Township (Ingham County)	2017	1
MI	Wheatland Township (Mecosta County)	2017	1
MI	Wheatland Township (Sanilac County)	2017	1
MI	Wheeler Township (Gratiot County)	2017	1
MI	White Cloud City (Newaygo County)	2017	1
MI	White Oak Township (Ingham County)	2017	1
MI	White Pigeon Township (St Joseph County)	2017	1
MI	Whitefish Township (Chippewa County)	2018	1
MI	Whiteford Township (Monroe County)	2017	1
MI	Whitney Township (Arenac County)	2018	1
MI	Whittemore City (Iosco County)	2017	1
MI	Wilber Township (Iosco County)	2017	1
MI	Wilcox Township (Newaygo County)	2017	1
MI	Williamston City (Ingham County)	2017	1
MI	Williamstown Township (Ingham County)	2017	2

State	Jurisdiction	Year Implemented	ICX w/BMD
MI	Wilmot Township (Cheboygan County)	2018	1
MI	Wilson Township (Alpena County)	2018	1
MI	Wilson Township (Charlevoix County)	2017	1
MI	Winsor Township (Huron County)	2017	1
MI	Wisner Township (Tuscola County)	2017	1
MI	Woodland Township (Barry County)	2018	2
MI	Woodstock Township (Lenawee County)	2017	2
MI	Worth Township (Sanilac County)	2017	1
MI	Wyoming City (Kent County)	2017	22
MI	Yale City (St Clair County)	2017	1
MI	Yankee Springs Township (Barry County)	2018	2
MI	Yates Township (Lake County)	2018	1
MI	Zilwaukee City (Saginaw County)	2018	1
MI	Zilwaukee Township (Saginaw County)	2018	1
OH	Huron County	2019	2
PA	Armstrong County	2019	72
PA	Crawford County	2019	204
PA	Montgomery County	2019	450
PA	Pike County	2019	25
		Grand Total:	**12,013**

Below Dominion is pleased to provide a list of our customers that leverage the ImageCast X's easy to use touchscreen with a ERD-VVPAT configuration.

State	Jurisdiction	Year Needed	ICX w/ERD-VVPAT
OH	Adams County	2019	105
OH	Butler County	2019	1500
OH	Greene County	2019	660
OH	Hancock County	2019	290
OH	Hardin County	2019	125
OH	Perry County	2019	140
OH	Richland County	2019	520
OH	Scioto County	2019	290
OH	Wayne County	2019	440
OH	Wood County	2019	525
NJ	Essex County (SOE)	2018	4
NV	Churchill County	2017	65
NV	Churchill County	2018	9

State	Jurisdiction	Year Needed	ICX w/ERD-VVPAT
NV	Douglas County	2018	151
NV	Elko County	2018	104
NV	Esmeralda County	2018	13
NV	Eureka County	2018	10
NV	Humboldt County	2018	34
NV	Lander County	2018	25
NV	Lincoln County	2018	27
NV	Lyon County	2018	154
NV	Mineral County	2018	27
NV	Nevada State	2018	2
NV	Nye County	2018	134
NV	Pershing County	2018	20
NV	Storey County	2018	24
NV	Storey County	2017	2
NV	Washoe County	2017	1325
NV	White Pine County	2018	19
OH	Fairfield County	2019	630
UT	Utah County	2018	100
NV	Clark County	2017	5000
		Grand Total:	**12,474**

Question #2

Provide a plan for polling place setup that includes all necessary components for a fully-executable election based on current Georgia voter activity (i.e. with approximately 90% of voting occurring in-person).

Dominion Response

Polling Place Setup Plan

Setup Materials – many of the items below are pre-delivered prior to Election Day.

ICX-BMD Units

- Voter Smart Cards
- Pollworker Smart Cards
- Ballot Paper
- UPS Unit for BMD Printer Battery Backup
- Voting Booths – ICX in soft case, BMD in soft case
- or ICX-BMD Carts containing ICX, BMD and UPS t

ICP Tabulator

- Ballot Box Keys
- iButton Security Key
- Sealed and Secure Ballot Box containing ICP device

Poll Pads

- Poll Pad cases with tables and chairs for setting up Poll Pads for voter check in and voter smart card creation

Other Supplies

- Power Strips as needed
- All State/County Required Forms
- Seals for ICP and ICX-BMD devices
- Provisional Ballots
- Ballot Marking Pens for Provisional Ballots
- Ballot Marking Booths for Provisional Ballots or individuals requesting a hand marked ballot
- Fail safe Ballots as deemed necessary
- 'I Voted' Stickers
- Transfer Cases/Bags for Transport of Voted Ballots and Tabulator Memory Cards
- Signage

Setup

The Polling Place should be set up to facilitate the movement of voters through the space. The ICP tabulator should be set up near the exit so that voters can insert their ballots and return their voter smart cards before leaving the Polling Place. The Ballot Box is easily rolled into position and the wheels have locking casters preventing the box from moving as Voters insert their ballots. ICX-BMD voting stations should be arranged so to permit voter privacy. See Polling Place Setup diagram below.

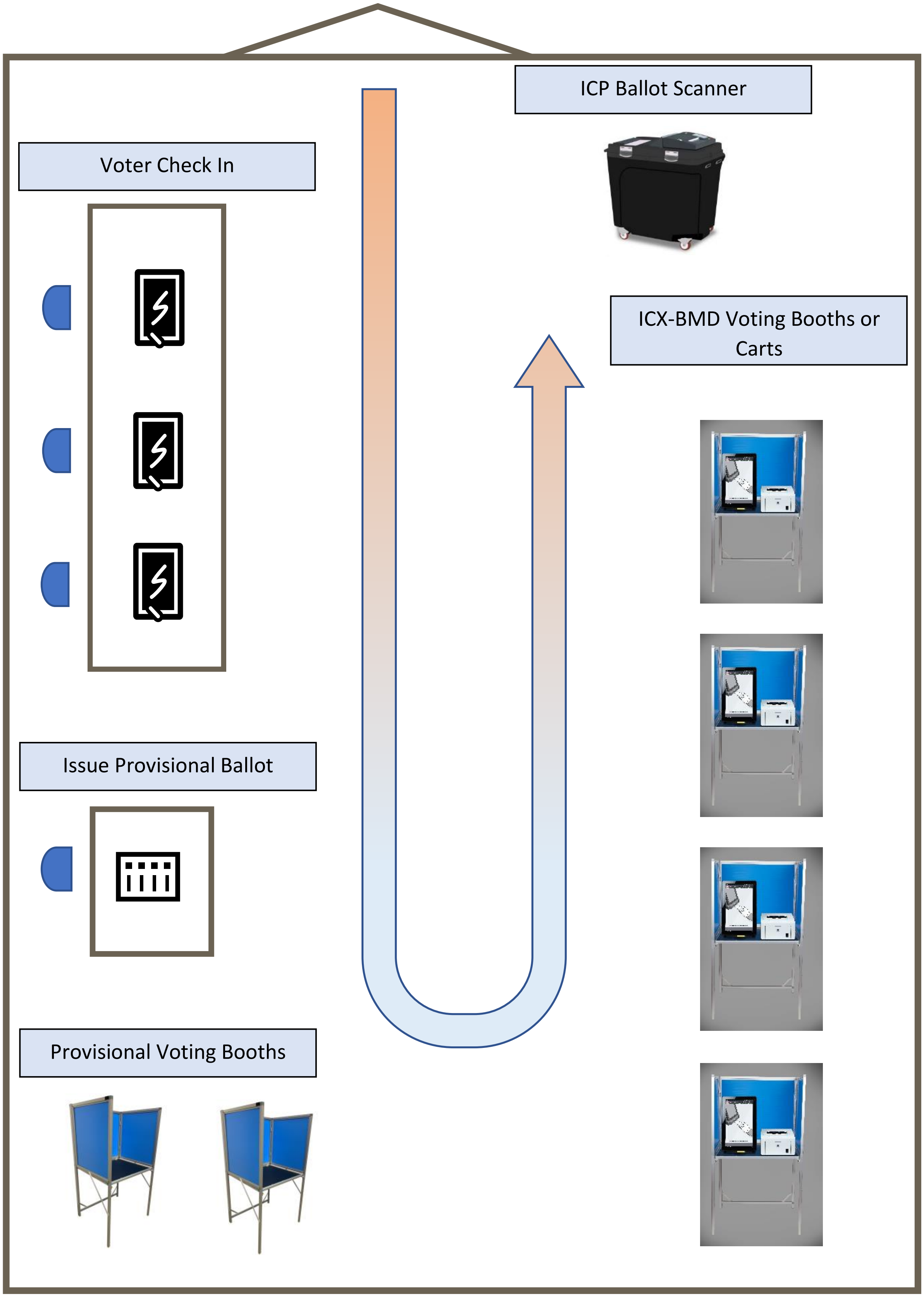
- Set up Voter Check In tables.
- Plug in and power up Poll Pad units
- Set up Provisional Ballot Issuing table with Provisional Ballots
- Set up Provisional Voting Booths
- Set up and position ICX-BMD Voting Booths or ICX-BMD Carts to maximize voter privacy
- Plug in and power on UPS Unit
- Plug BMD Printer(s) into UPS Unit and power on BMD Printer(s)
- Plug ICX Units into power strips and power on
- Open Polls on ICX-BMD Units
- Break Seals and Remove Security Lid from the ICP tabulator
- Plug in the ICP tabulator (turn on is automatic)
- On the ICP tabulator, open the polls and print the zero totals report
- Reapply Security Seals on all devices as required
- Poll Workers sign Zero tape

Voting Activity

- Voter Checks in and receives Ballot Activation Smart Card
- Voter advances to any available ICX-BMD station
- Voter navigates ballot and prints their ballot
- After review of the ballot, the voter walks to the ICP scanner and inserts their ballot
- Periodic reconciliation of the Registration totals to the number of ballots printed by the ICX-BMD stations compared to the Public Counter on the ICP

Poll Closing

- The number of voted ballots per the ICP Scanner are compared to the Poll Book registration process
- Any differences should be reconciled
- Once reconciled, the ICP is closed and results tapes printed
- Ballots are removed from the ICP secure Ballot Box and placed in a secure transfer case or bag
- Remove the Poll Worker memory card and place the memory card from the ICP into a secure transport envelope
- Power down the ICP and all ICX-BMD stations
- Pack all supplies, devices and cords as instructed in training class for pick up and transport back to the election office.


ICP Ballot Scanner
Voter Check In
ICX-BMD Voting Booths or Carts
Issue Provisional Ballot
Provisional Voting Booths

KNOWiNK Response

Complete step-by-step details on the procedure to set-up the KNOWiNK Poll Pad can be found in *Attachment 1_ KNOWiNK Poll Pad Training Guide,* submitted as a separate .PDF file with this response.

Question #3

Provide a narrative explanation of how your hashing solution will allow election officials to readily conduct hash verification of all applicable components. Include a list of components that are able to be hash verified and all that are not able to be hash verified.

Dominion Response

[redacted]

[redacted]

Hash Verification
Sample.xlsx

5. Paste the hash values of the component software (from step 3 above) into column D of the workbook.

[redacted]

[redacted]

Question #4

Provide a roll-out plan for deploying all equipment to all 159 counties through a phased roll-out by the fourth quarter of 2019 for full functionality for the Presidential Preference Primary to be held on March 24, 2020.

The Dominion Implementation Plan is very comprehensive, as it should be, to accomplish the task ahead while mitigating the risks associated with a statewide roll out of a new voting system. As detailed in Dominion's Implementation Plan that was submitted to GASOS in in response to sections 12.1, 12.4, and 12.5 of the RFP, the Plan includes sufficient time to train, test, and deploy the entire system in all 159 counties. The Plan proposes delivery of all equipment by the end of the fourth quarter of 2019. We developed that scope and pace even though the RFP required an "all delivery" as late as March 31, 2020.

Dominion is confirming the commitment to deliver all system components by the end of 2019. The Delivery Schedule to Dominion's Warehouse is itemized below. Dominion intends to occupy the warehouse immediately upon contract signing. The July shipment of products will occur within a couple weeks of contract signing.

- **July 2019**
    - 800 Poll Pads; Pilot County Voting System components per *Attachment O-Potential Equipment Distribution* of the GASOS RFP.
- **August 2019**
    - All EMS software, equipment, and the 3,500 ICP Scanners
- **September 2019**
    - Begin delivery of BMD devices
- **October 2019**
    - 3,600 Poll Pads; large quantities of BMD devices
- **November 2019**
    - 3,600 Poll Pads; large quantities of BMD devices
- **December 2019**
    - Completion of all BMD devices

The master delivery schedule addresses the Pilot County needs first so training content may be tailored to the situation and training classes conducted in August and September. Poll worker training will be conducted in October or perhaps sooner as the Counties adjust to the change-over. Delivery of the Pilot County equipment will be scheduled to correspond to the decommissioning program and readiness of the counties to receive new product.

The delivery schedules for the remaining counties will align with the State's decommissioning plans and schedules following the November Election. By delivering and accepting the EMS software and equipment including central scanning equipment in August, we will then focus on the high-volume Acceptance Testing for the BMD's beginning in October, or late September if the GASOS staff schedules permit.

The plan accelerates in November once the General Election is finalized and the decommissioning program kicks off. The pace will continue right up until the end of the year with the goal to have all counties delivered by the end of December 2019. If for any reason there are schedule delays, we will have sufficient inventory of voting system and poll book products in the warehouse Acceptance Tested to ensure every county has system components from which to train.

Dominion is committed to the plan as described beginning as soon as the State selects Dominion as their preferred vendor and partner.

Below is a Summary of the tasks identified in the overall Implementation Strategy and Plan.

Summary of Comprehensive Implementation Plan

Immediately Following Contract Award:
- Secure a Local Warehouse Facility – to house Products and Product Specialists
- Assign Dominion Project Management Hierarchy and Technical Staff Duties
- Project Initiation and Kick-Off Meeting
- Requirements Gathering, Gap Analysis and Application Configuration
- Security Plan Development for Facility and Deployment of Products
- Establish Media and Outreach Programs
- Prepare space and staff for Receipt of Initial Product Deliveries
- Prepare and gain approval from GASOS for overall training programs and curriculum
- Establish Recruitment and Training of Subcontractors
- Initial Training of GASOS Staff – total system and software
- Establish Help Desk in Dominion Facility

Receipt of Products for Pilot Election: July 2019
- Acceptance Testing of Voting System, Software and Poll Pads by GASOS
- Hash Validation Testing
- Distribution to begin of all voting system products to the respective Pilot counties
- In House Depot Repair as needed

November Pilot Election Training and Support:
- Coding of Election Databases – additional GASOS training
- Training of Pilot County Staff- on site
- Training of Poll Workers – on site
- Training Election Day Rovers - central warehouse
- Logic and Accuracy Testing, Validation – on site
- Election Day (3 day) Support – on site
- Post-Election Auditing and Validation

Monthly Receipt of Products for Presidential Preference Primary Election: August to December 31, 2019:
- Acceptance Testing of Voting System, Software and Poll Pads by GASOS
- Hash Validation Testing

- Prepare the equipment and all auxiliary items for delivery to counties immediately following the November Election
- Establish an agreed to roll out plan combing Phase 2 Part 1 and Part 2
- Distribution of all voting system products to the respective counties
- In House Depot Repair as needed

Presidential Preference Primary Election Training and Support March 24, 2020:

- Coding of Election Databases – additional GASOS training
- Recruitment and Training of Regional Managers
- Training of County Staff- 14 regional sites
- Training of Poll Workers – 14 regional sites
- Training Election Day Rovers – dispatch (80) Centrally and Regionally
- Recruitment and Training of County Support Technicians (159 +1)
- Logic and Accuracy Testing, Validation – on site
- Election Day (3 day) Support – on site
- Post-Election Auditing and Validation

Post-Election Debrief Meeting and Auditing Procedures

Recap Project Management Performance and Issues:

- Issue Management
- Risk Management
- Schedule Management
- Quality Assurance
- Change Control
- Updates and Upgrades

Development of Implementation Scope and Staffing for Remainder of 2020 and 2021

Repeat of above tasks for the remaining 2020 elections including run offs:

- Coding of Election Databases – additional GASOS training
- Re-training of Regional Managers
- Training of County Staff- 14 regional sites
- Training of Poll Workers – 14 regional sites
- Re- training Election Day Rovers – dispatch (80) Centrally and Regionally
- Re- training of County Support Technicians (159 +1)
- Logic and Accuracy Testing, Validation – on site
- Election Day (3 day) Support – on site
- Post-Election Auditing and Validation

Voter Outreach Programs Continue

Post-Election Debrief Meeting

Recap Project Management Performance and Issues:

- Issue Management
- Risk Management
- Schedule Management
- Quality Assurance
- Change Control
- Updates and Upgrades

Establish Dominion's Permanent Georgia Support Staff

Pricing Narrative – Due June 24, 2019

Form: eRFP Pricing

This schedule contains in its entirety all the equipment, software and services specified in the RFP.

Election Management System (EMS) – Software & Hardware:

The Election Management System (EMS) includes statewide licenses for the Democracy Suite modules to build the ballots for all 159 counties, tabulate and report the results for all 159 counties and to export county results to the State; statewide Adjudication modules to allow each county to electronically adjudicate (eliminate manual duplication of ballots) all ballots scanned each election and to provide the basis for auditing of results post-election; statewide Test Deck modules permitting the counties to produce internally test decks for L&A testing each election; and finally statewide licenses for UOCAVA ballots to process remote ballots without the need to duplicate ballots manually. The price as shown also includes 4 main servers for the State, 171 Client servers for the State and each County and 183 Adjudication servers for the State and each County. The larger counties have been allotted multiple Client and Adjudication servers due to the volume of absentee ballots received.

Electronic Poll Book Management System (EPDMS) – Software & Hardware and Electronic Poll Book (EPoll):

The schedule includes the ePoll Book Statewide Software License and 8,000 poll pads including all accessories required to operate in each polling site. Each poll pad includes:

Apple IPad
Carry Case
Stand
Stylus
2 Encoders
Shipping
ISync Drives
Warranty - two years
Software License

Ballot Marking Device (BMD) (with ability to stand and provide privacy):

The 30,050 ICX BMD (Ballot Marking Devices) devices including 30,050 Privacy Voting Booths; 30,050 ICX Carry Cases; 30,050 BMD Carry Cases; 2,754 ATI ADA kits with Braille touch pad and headsets; and 2,913 UPS battery backup units for each polling site plus spares for the rovers on election day. All voter access smart cards, poll worker smart cards and technician smart cards are included.

As was discussed during the clarifying meeting on June 18th, the Privacy Voting Booths plus the ICX and BMD Carry Cases may be exchanged for the standalone metal Cart that houses the BMD (ICX, Ballot Printer and cabling) at no additional cost to the state. In the event some counties may prefer the Voting Booth concept and others may prefer the Cart concept, there is no net effect on cost as these items are cost neutral. A final decision on quantities can be made at contract negotiations without adversely affecting the price.

Polling Place Scanner (PPS) and Ballot Box:

The schedule includes 3,500 Polling Place Scanners, the ICP, with its plastic ballot box with security lid along with paper rolls and seals for elections in 2019 and 2020. We stated in the body of the RFP Response that a collapsible Ballot Box is available if the State or select counites want the collapsible ballot box rather than the standard ballot box. If selected, the collapsible box is cost negative. It was discussed at the Tuesday June 18, 2019 meeting that it is preferable for all counties to receive the secure lid standard ballot box.

Central Scanning Device (CSD):

We have proposed 165 Central Scanning Devices – 20 model G1130 for the larger counties and 145 M160ii scanners for the remaining counties statewide. These table top scanners are very easy to operate and take up little space in the courthouse. The counties will be able to scan absentee and UOCAVA ballots efficiently while adjudicating ballots electronically.

Implementation and Training Cost:

Lastly, but vitally important to the success of the project is the Implementation and Training Plan. Details of the Implementation and Training plan will be discussed in the narrative to follow.

Form: Post Warranty

The Post Warranty schedule discloses the annual license, firmware and extended warranty fees due for the remaining 8 years after the initial two-year warranty expires. The schedule is self-explanatory.

Form: County Purchases

In the original RFP, this schedule asks for costs to print absentee ballots internally in each county and Dominion disclosed the price of blank ballot stock for each county to print absentee ballots internally.

We quoted blank ballot stock pricing for internally printing of absentee ballots consistent with our original submission. Many of the counties have Oki Data BOD printers now used for printing absentee ballots. Dominion ballots can be printed in house as thy are now. The counties should consider purchasing Dominion's Remote Ballot Printing (RBP) module with a new and current model OKI printer. Over 10-year cost of ownership, the RBP Module solution represents a significant savings compared to having the absentee ballots printed commercially over the same 10-year period. Dominion will be happy to provide the information to support that statement.

For the price of 7,000,000 ballots, we used the BMD blank stock price and estimated absentee ballots to be approximately 10% or 700,000 statewide and used that quantity at the blank ballot stock pricing. Actually if 7,000,000 ballots were cast and the absentee ballots printed was equal to 10%, the 7,000,000 ballots should be 6,300,000 cast at the polls and 700,000 ballots printed as Absentee. We followed the form as the cells are locked not allowing any adjustment.

As for other consumables such as PPS paper rolls, 14,000 rolls are included with the system. BMD ink cartridges have a life of over 3,100 ballots printed per device. The original ink cartridge will last for 23 or more elections before needing to be replaced at the rate of 133 votes per election on a single device. The replacement of BMD toner would occur in 2027. The ICP scanner lithium batteries have a 5-year life and the ICX lithium batteries also have a 5-year life. Year 6, 2025, the batteries should be replaced. These costs are not included in the County Purchases tab because the cells in the 2025 and 2027 columns are locked not allowing entry of data. Dominion will be happy to provide that information if requested.

Form: Implementation Worksheet

The comprehensive Implementation Plan was constructed in a tried and proven manner by Dominion and our experienced subcontractors that have implemented multiple statewide voting systems over the last 15 to 16 years. The Dominion staff and subcontractor experience include the statewide roll out in Georgia in 2002 many of us participated in.

The plan identifies all known risk factors and has mitigation procedures in place as an issue is identified. The plan meets or exceeds all the time frames identified by the State in the RFP. In fact, we plan to be ahead of schedule due to the ability of Dominion to deliver products monthly beginning in August. Being ahead of schedule allows us to focus on training and support services required during the roll out and preparation for the PPP election on March 24, 2020. See below the delivery schedule for voting system components and Poll Books.

Dominion anticipates over 300 subcontractors will be recruited, trained and deployed to perform strategic tasks as defined by our Project Management team over the course of the Implementation. Most subcontractors will be Georgia residents, and some will be retained as permanent employees of Dominion to provide local support for the GASOS and counties after the initial implementation.

Dominion's Security and Media/Outreach experts will be engaged day one of the contract period to provide the assistance we anticipate the GASOS will need to address media and other interested groups' coverage of the new system roll out. Dominion understands the scrutiny the new system and GASOS staff will face and commits to being by your side continually from the start of the project.

The warehouse has been identified. As soon as the contract award is made we are ready to lease the property and start the process of preparing the warehouse to receive product allocated to the Pilot counties.

Delivery Schedule to Dominion Warehouse: the schedule to follow confirms Dominion's commitment to delivering all voting system components by the end of the fourth Quarter 2019.

July 2019 – 800 Poll Pads; Pilot County Voting System components per Attachment F
August 2019 – all EMS software, equipment and ICP Scanners
September 2019 – begin delivery of BMD devices
October 2019 – 3,600 Poll Pads; large quantities of BMD devices
November 2019 – 3,600 Poll Pads; large quantities of BMD devices
December 2019 – completion of all BMD devices

Dominion's focus is to deliver equipment to aid in the development and conducting training to the GASOS staff and Counties. This focus early in the process insures the curriculum, content and training schedules mesh well with the decommissioning program the GASOS will be offering to the counties. The Training Plans are detailed below:

Georgia Implementation Training Plan

The following is an in-depth training plan as requested and is submitted with the understanding that training dates and training content are subject to change pending award of the contract and the outcome of collaboration with the GASOS/County Election Officials.

Pre-Training Tasks

2 Days: 7/16 to 7/17 - Meeting with GASOS and GASOS-selected County Election Officials to customize training documentation, syllabi, demonstration project and ballots to reflect GA election procedures and terminology.

18 Days: 7/15 to 8/1 - Customized training documentation, syllabi, demonstration project and ballot development.

8 Days: 8/2 to 8/9 - GASOS review and approval of final training documentation, syllabi, demonstration project and ballot and set/confirm the training schedule.

Phase 1 Training Plan

GASOS – 8/12 to 8/23 – 10 Days
- Election Programming – 4 1/2 Days
- DSuite Administrator and User – 2 Days
- ICX-BMD/ICP Operator – 1 Day
- ICC/ADJ Administration – 1 Day
- ICC/ADJ Operator – ½ Day
- UOCAVA – 1 Day

Counties – Administrative/User – 8/26 to 9/9 – 2 Regional Trainings - 4 Days Each
- DSuite Administrator and User – 2 Days
- ICC/ADJ Administration – 1 Day
- UOCAVA – 1 Day

Counties – Operator/Pollworker – 9/10 to 9/13 – 2 Regional Trainings - 2 Days Each
- ICX-BMD/ICP Operator – 1 Day
- ICC/ADJ Operator – ½ Day
- Pollworker Train the Trainer – ½ Day

Phase 2 Training Plan

Counties not holding December Runoff Election

Counties – Administrative/User – 11/11 to 12/13 – Regional Trainings - 4 Days Each
- DSuite Administrator and User – 2 Days
- ICC/ADJ Administration – 1 Day
- UOCAVA – 1 Day

Counties – Operator/Pollworker – 11/11 to 12/13 – Regional Trainings - 2 Days Each
- ICX-BMD/ICP Operator – 1 Day
- ICC/ADJ Operator – ½ Day
- Pollworker Train the Trainer – ½ Day

Counties holding December Runoff Election

Counties – Administrative/User – 12/9/2019 to 1/17/2020 – Regional Trainings - 4 Days Each
- DSuite Administrator and User – 2 Days
- ICC/ADJ Administration – 1 Day
- UOCAVA – 1 Day

Counties – Operator/Pollworker – 12/9/2019 to 1/17/2020 – Regional Trainings - 2 Days Each
- ICX-BMD/ICP Operator – 1 Day
- ICC/ADJ Operator – ½ Day
- Pollworker Train the Trainer – ½ Day

Courses

DSuite Election Programming – 5 Days

- Democracy Suite Election Programming Software Overview
- Template (Master) Election Project Concepts
- Election Programming Phases
- Introduction to Election Event Designer
- Working with Election Projects – Manual Project Build
- Election Project Definition – Primary and General Elections
- Divisioning – Districts, Precincts, and Elector and Ballot Groups
- Election Event – Contests and Candidates
- Localization – Language Management
- User Management
- Advancing to Election Project Styling
- Ballot Styling and Templates
- Translations – Single and Multiple Language
- Creating the Ballots and Audio Ballot Files
- Previewing Audio Ballot Files
- Creating Electronic Ballot Headers
- Tabulation Setup
- Preparing Proofing Packages
- Create Election (Tabulator) Files
- Create Final Project Backup for Transfer to County
- Advanced Functions – Creating Template (Master) Projects and Using Election Data Translator for Import/Export of Election Definition Data

DSuite Administrator and User – 2 ½ Days

- Introduction to Democracy Suite
  - Democracy Suite Software Component Overview
  - Tabulator Systems Overview
    - ImageCast Precinct Ballot Scanner – ICP
    - ImageCast X-Ballot Marking Device – ICX-BMD
    - ImageCast Central – ICC
  - Review of Quick Reference Guides
  - Additional System Components
  - Consumable Items
  - Voting System Process Overview
  - Generic Election Timeline and Workflow Responsibilities Review
- The Election Proofing Process
  - Overview of the County Proofing Process
  - The Election Proofing Package
  - Proofing Ballots
  - Proofing Reports
  - Proofing Audio Ballot Files

- Election Preparation
  - Election Event Designer – EED – Programming the Tabulators
  - Setting Up ImageCast Central – ICC
  - Setting Up Adjudication
- Logic and Accuracy Testing
  - Testing Steps Overview
  - Test Deck Overview
  - Logic and Accuracy Test Procedures
    - ICX-BMD/ICP
    - ICC with Adjudication
    - RTR
- Results Talley and Reporting - RTR
  - Overview of RTR
  - Opening an Election in RTR
  - RTR Settings
  - Loading Election Results
  - Managing Results Files and Tabulators in RTR
  - Manual Entry of Results
  - Results Reporting and Exporting
  - Exporting Results Manually
- Backing up the Final Results
- Purging Test Results

ICC/ADJ Administration – 1 Day

- Overview of ICC and ADJ Functionality
- Setting Up the ICC – Loading the Tabulator Files and Scanner Configuration
- Setting Up RTR to Manage, Monitor and Automatically Upload Results From ICC/ADJ
- Setting Up Adjudication – Loading the Election and Setting Conditions
- Logic and Accuracy Testing
- Ballot Handling
  - Scanning Ballots and Common problems
  - Batch Handling
    - Rejecting and Resetting batches
    - Deleting Batches
- Adjudicating Ballots
  - Standard User Vs. Administrative User
  - Ballot Overlays
  - Ballot Review and AuditMark
  - Write-in Resolution
  - Submitting Batches
  - Managing Quarantined Ballots

UOCAVA – 1 Day

- Configuring UOCAVA
    - Display
    - Language Management
    - Voter ID and PIN Options
- Tabulator Management
    - Importing Election Files
    - Configuring Parameters
- Download Administration
    - Editing the Ballot Package
    - Cover Sheet, Affidavit, and Return Envelope Settings
    - Security Question Administration
- User Management
- Customization
    - Logos
    - Color Schemes
- Voter List Management
- Accessibility
- Testing
- Reporting

ICX-BMD/ICP Operator – 1 Day

- ICP Operations
    - Hardware Overview
    - Loading/Changing Paper Tape
    - Loading the Memory Cards
    - Acceptance Testing
    - Maintenance and Troubleshooting
- ICX-BMD Operations
    - Hardware Overview
    - Loading Paper and Toner in the BMD Printer
    - Loading Election Files
    - Acceptance Testing
    - Maintenance and Troubleshooting
- Logic and Accuracy Testing
    - Test Decks and Vote Sims
- Voting Equipment in the Polling Place
    - Setting up the Equipment
    - Opening the Polls
    - Activating Voter Cards
    - Voting on the ICX-BMD/ICP
    - Closing the polling place

ICC/ADJ Operator – ½ Day

- Ballot Handling
    - Scanning Ballots and Common problems
    - Batch Handling
        - Rejecting, Resetting, and Deleting Batches
- Adjudicating Ballots
    - Ballot Overlays
    - Ballot Review and AuditMark
    - Write-in Resolution
    - Quarantining Ballots

Pollworker Train the Trainer – ½ Day

- Training Techniques
- Learning Styles
- Presentation Skills
- Voting Equipment in the Polling Place
    - Setting up the Equipment
    - Opening the Polls
    - Activating Voter Cards
    - Voting on the ICX-BMD/ICP
    - Troubleshooting
- Closing the Polls

Form: Additional Products and Services

The schedule contains Dominion's price for the items listed for the duration of the ten-year contract. Any pricing adjustments from the price as shown would be determined at the time of purchase. The exchange of booths and bags for carts will be entertained as discussed in the meeting Tuesday June 18, 2019.

eRFP Proposal for the Georgia Secretary of State
2019
eRFP Name
Statewide Voting System
eRFP Number
47800-SOS0000037
Vendor Name
Dominion Voting
Vendor Address
1201 18th Street, Suite 210
Denver, Colorado 80202
Vendor Point of Contact and Contact Information
Barry Herron
barry.herron@dominionvoting.com
419-350-8455

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Vendor	Dominion Voting

The purpose of the Cost Model for this eRFP is to provide a fixed price fee structure for initial purchase and a total cost of ownership for a yen (10) year period so that the Suppliers' responses can be compared equitably. **At a minimum**, each Supplier should provide the details for the line items requested for: the initial purchase requirements, installation, cost through December 31, 2021 as covered in the warranty period, and the remaining costs for the ten (10) year term of the contract.

Each Supplier is encouraged to supplement this pricing information with additional details as a separate worksheet and/or line items to demonstrate a fully loaded cost. Pricing information should support and demonstrate the ability to cover all costs associated with the requirements and as detailed in your responses to the Mandatory Scored Questions.

Note that the Cost Model Evaluation will include the initial ten (10) year term of the contract to ensure that the interest of the counties is represented in the proposal and for them to budget for future years. The initial cost through December 31, 2021 to fully purchase, distribute, implement, and train all GASOS employees and counties (fully loaded) will be considered under and constrained by the budget proposal as defined by the Georgia General Assembly.

The initial cost through December 31, 2021 to fully purchase, distribute, implement, and train all GASOS employees and counties (fully loaded) will be constrained by the budget proposal as defined by the Georgia General Assembly.

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Vendor	Dominion Voting
	eRFP
	This section will be used to capture the total contract cost for the initial equipment purchase, implementation, and training and will be included in the Cost Model Calculation.
	Post Warranty
	After the initial purchase and two year initial warranty period through December 31, 2021, the state and counties will need details for the additional cost to support the software via software and licensing fees and all equipment through applicable additional maintenance and warranty costs. This worksheet is to provide these details and will be included in the Cost Model Calculations.
	County Purchases
	After the initial purchase and two year initial warranty period through December 31, 2021, counties will need details for the additional cost for consumables to support elections for counties of various sizes. The cost model includes four sections to capture the cost for extra large counties (200,000 ballots), large counties (75,000 ballots), medium counties (35,000 ballots) and small counties (10,000 ballots) to be included in the Cost Model Calculations. There is an additional section for reference only that will be used as check sum and data point for consumables to support an election with 7,000,0000 ballots and will not be included in the Cost Model Calculations.
	Implementation Worksheet
	This worksheet is to be used to show your detailed implementation costs and will be a subset of the total of your implementation costs as captured in the eRFP tab. This worksheet will not be included in the Cost Model Calculations except as an item in the eRFP tab and line item total.
	Cost Calcs
	The Supplier is to provide no information on this tab, it is to be calculated from the populated sections covered. The Supplier should confirm and check that the totals from the individual worksheets are accurately reflected.
	Additional Products and Services
	This worksheet will be used to capture future equipment purchases that may be independently made and pricing that could be used to create a Contract MSLA and will not be included in the Cost Model Calculations.

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SVS components included in the eRFP	Qty	Price Per Unit	Total Price	Notes
Election Management System (EMS) - Software & Hardware	1	$834,673.35	$834,673.35	All components needed for operation at state level and 159 counties
Electronic Poll Bool Management System (EPDMS) - Software & Hardware	1	$30,000.00	$30,000.00	All components needed for operation at state level and 159 counties
Electronic Poll Book (EPoll)	8,000	$705.18	$5,641,440.00	All components needed for operation
Ballot Marking Device (BMD) (with ability to stand and provide privacy)	30,050	$1,986.17	$59,684,408.50	All components needed for operation
Polling Place Scanner (PPS) and Ballot Box	3,500	$2,330.36	$8,156,260.00	All components needed for operation
Central Scanning Device (CSD)	165	$4,950.11	$816,768.15	All components needed for operation
Implementation and Training Cost	1	$14,772,040.80	$14,772,040.80	All services needed for full implementation (Use Implementation Worksheet for Detail)
		TOTAL:	**$89,935,590.80**	

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Post Warranty Cost

Item Description		**Annual Software License and Support**							
	Units	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
Election Management System (EMS)	1	$190,500.00	$190,500.00	$190,500.00	$190,500.00	$190,500.00	$190,500.00	$190,500.00	$190,500.00
Electronic Poll Bool Management System (EPDMS)	1	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Electronic Poll Book (EPoll)	8,000	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Ballot Marking Device (BMD)	30,050	$2,319,108.75	$1,660,342.25	$1,660,342.25	$1,660,342.25	$1,660,342.25	$1,660,342.25	$1,660,342.25	$1,660,342.25
Polling Place Scanner (PPS)	3,500	$410,571.00	$293,636.60	$293,636.60	$293,636.60	$293,636.60	$293,636.60	$293,636.60	$293,636.60
Central Scanning Device (CSD)	165	$287,605.50	$205,113.81	$205,113.81	$205,113.81	$205,113.81	$205,113.81	$205,113.81	$205,113.81
TOTAL:		$3,207,785.25	$2,349,592.66	$2,349,592.66	$2,349,592.66	$2,349,592.66	$2,349,592.66	$2,349,592.66	$2,349,592.66
								TOTAL:	**$19,654,933.87**

Item Description		**Annual Hardware Maintenance Fees**							
	Units	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
Electronic Poll Book (EPoll)	8,000	$890,000.00	$890,000.00	$890,000.00	$890,000.00	$890,000.00	$890,000.00	$890,000.00	$890,000.00
Ballot Marking Device (BMD)	30,050	$2,396,412.38	$1,593,886.24	$1,593,886.24	$1,593,886.24	$1,593,886.24	$1,593,886.24	$1,593,886.24	$1,593,886.24
Polling Place Scanner (PPS)	3,500	$1,498,522.62	$997,483.41	$997,483.41	$997,483.41	$997,483.41	$997,483.41	$997,483.41	$997,483.41
Central Scanning Device (CSD)	165	$67,656.75	$47,514.69	$47,514.69	$47,514.69	$47,514.69	$47,514.69	$47,514.69	$47,514.69
TOTAL:		$4,852,591.75	$3,528,884.34	$3,528,884.34	$3,528,884.34	$3,528,884.34	$3,528,884.34	$3,528,884.34	$3,528,884.34
								TOTAL:	**$29,554,782.13**

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Assume No Stock on Hand

Provide pricing for one Extra Large Sized County to provide Consumables for 200,000 ballots	Qty	Qty Required	Price Per Unit 2020	Total Price 2020	Price Per Unit increase (Fixed % or ≤ C.P.I.)	Total Price 2021	Total Price 2022	Total Price 2023	Total Price 2024	Total Price 2025	Total Price 2026	Total Price 2027	Total Price 2028	Total Price 2029
Ballots	200,000	200,000	$0.13	$26,000.00		$26,000.00	$26,000.00	$26,000.00	$26,000.00	$26,000.00	$26,000.00	$26,000.00	$26,000.00	$26,000.00
Other Paper (e.g. printer tapes)				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Ink	30,050	30,050		$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables	30,050	30,050		$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables	3,500	3,500		$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
			TOTAL:	$26,000.00	**TOTAL:**	$26,000.00	$26,000.00	$26,000.00	$26,000.00	$26,000.00	$26,000.00	$26,000.00	$26,000.00	$26,000.00

Total:	$260,000.00	
Quantity	11	$2,860,000.00

Assume No Stock on Hand

Provide pricing for one Large Sized County to provide Consumables for 75,000 ballots	Qty	Qty Required	Price Per Unit 2020	Total Price 2020	Price Per Unit increase (Fixed % or ≤ C.P.I.)	Total Price 2021	Total Price 2022	Total Price 2023	Total Price 2024	Total Price 2025	Total Price 2026	Total Price 2027	Total Price 2028	Total Price 2029
Ballots	75,000	75,000	$0.13	$9,750.00		$9,750.00	$9,750.00	$9,750.00	$9,750.00	$9,750.00	$9,750.00	$9,750.00	$9,750.00	$9,750.00
Other Paper (e.g. printer tapes)				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Ink				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
			TOTAL:	$9,750.00	**TOTAL:**	$9,750.00	$9,750.00	$9,750.00	$9,750.00	$9,750.00	$9,750.00	$9,750.00	$9,750.00	$9,750.00

Total:	$97,500.00	
Quantity	41	$3,997,500.00

Assume No Stock on Hand

Provide pricing for one Medium Sized County to provide Consumables for 35,000 ballots	Qty	Qty Required	Price Per Unit 2020	Total Price 2020	Price Per Unit increase (Fixed % or ≤ C.P.I.)	Total Price 2021	Total Price 2022	Total Price 2023	Total Price 2024	Total Price 2025	Total Price 2026	Total Price 2027	Total Price 2028	Total Price 2029
Ballots	35,000	35,000	$0.13	$4,550.00		$4,550.00	$4,550.00	$4,550.00	$4,550.00	$4,550.00	$4,550.00	$4,550.00	$4,550.00	$4,550.00
Other Paper (e.g. printer tapes)				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Ink				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
			TOTAL:	$4,550.00	**TOTAL:**	$4,550.00	$4,550.00	$4,550.00	$4,550.00	$4,550.00	$4,550.00	$4,550.00	$4,550.00	$4,550.00

Total:	$45,500.00	
Quantity	50	$2,275,000.00

Assume No Stock on Hand

Provide pricing for one Small Sized County to provide Consumables for 10,000 ballots	Qty	Qty Required	Price Per Unit 2020	Total Price 2020	Price Per Unit increase (Fixed % or ≤ C.P.I.)	Total Price 2021	Total Price 2022	Total Price 2023	Total Price 2024	Total Price 2025	Total Price 2026	Total Price 2027	Total Price 2028	Total Price 2029
Ballots	10,000	10,000	$0.13	$1,300.00		$1,300.00	$1,300.00	$1,300.00	$1,300.00	$1,300.00	$1,300.00	$1,300.00	$1,300.00	$1,300.00
Other Paper (e.g. printer tapes)				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Ink				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other Required Consumables				$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
			TOTAL:	$1,300.00	**TOTAL:**	$1,300.00	$1,300.00	$1,300.00	$1,300.00	$1,300.00	$1,300.00	$1,300.00	$1,300.00	$1,300.00

Total:	$13,000.00	
Quantity	57	$741,000.00
TOTAL:	**159**	**$9,873,500.00**

Assume No Stock on Hand

Consumables for running one statewide election with 7 million ballots on the proposed SVS				Notes
	Qty	Price Per Unit	Total Price	
Ballots	7,000,000	0.06	420000	BMD stock
Other Paper (e.g. printer tapes)	TBD			
Ink	TBD			
Other Required Consumables	700,000	0.13	91000	10% absentee printed in house
Other Required Consumables	TBD			
Other Required Consumables	TBD			
Other Required Consumables	TBD			
		TOTAL:	$511,000.00	

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Dominion Voting

Fill out all labor types applicable

Job Position	FTE, Supplier or Subcontractor Name	Hourly Rate During Implementation	Estimated Project Hours (through complete State rollout, installation of all equipment and training for all counties)	Cost Total
Project Director	Barry Herron, Nicole Nollette	$250.00	960	$240,000.00
Project Manager	Jason Frank	$250.00	$2,464.00	$616,000.00
Business Analyst	TBD			$0.00
Database Administrator	Jason Frank	$250.00		$0.00
Hardware Specialist	Tim Baumbach	$250.00	$4,992.00	$1,248,000.00
Programmer	Cathi Smothers Team	$437.50	$9,336.00	$4,084,500.00
Quality Assurance Lead	Tim Baumbach	$250.00		$0.00
Security Architect	Jeremy Holck, Kay Stimson	$250.00		$0.00
Technical Lead	Jason Frank	$250.00	$2,088.00	$522,000.00
Test Lead	Darren Silverburg	$250.00	$960.00	$240,000.00
Tester	TBD - Subcontractors			$0.00
Training Lead/Manager	Cathi Smothers Team	$250.00	$2,496.00	$624,000.00
Training Specialist	Mitch Keddrell	$250.00		$0.00
Other (specify)	TBD - Several catagories	$187.50	$3,680.00	$690,000.00
			Total:	$8,264,500.00

Implementation and Training Cost for Full SVS	Unit Price (Specify Unit Type)	Units	Total Price
FTE's - (Labor Rates captured above)			$8,264,500.00
Project Management (if not included in Labor Rate above)	125	400	$50,000.00
Software Programming and Configuration (if not included in Labor Rate above)	225	200	$45,000.00
Application Interface Modeling and Development (if not included in Labor Rate above)	187.5	400	$75,000.00
Consulting (if not included in Labor Rate above)			$0.00
Travel (Estimated Using State Travel Per Diem and Travel Guidelines)			$0.00
Sub contractors (if not included in Labor Rate above)	**105.3**	4480	$471,744.00
Ballot building services for all elections through June 30, 2021	105.3	20944	$2,205,403.20
Distribution cost: Warehouse, Acceptance, and Distribution			$0.00
Election Day Support- State Level On Site	105.3	768	$80,870.40
Election Day Support- County Level On Site (Single County)	105.3	33224	$3,498,487.20
Election Day Support- State Level Remote			$0.00
Election Day Support- County Level Remote (Single County)			$0.00
Training Fees (if not included in Labor Rate above)	81000	1	$81,000.00
		TOTAL:	$6,507,504.80

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Vendor	Dominion Voting

RFP TOTAL COST ANALYSIS

Cost Model		
	System Total	$89,935,590.80
	eRFP Total	**$89,935,590.80**
Sample (159 County Purchase)		
	System Total	$7,033,500.00
	Consumables Total	$9,873,500.00
	County Total	**$16,907,000.00**
	Total Cost Model:	**$106,842,590.80**
8 Years Post Warranty (County and State)		
	License Fees Total	$19,654,933.87
	Maintenance Fees Total	$29,554,782.13
7,000,000 Ballots (For Benchmark/Assessment Purpose Only)		
	Consumables Total	$511,000.00

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Vendor	Dominion Voting

Systems	Qty	Price Per Unit 2021	Total Price 2021	Price Per Unit increase (Fixed % or ≤ C.P.I.)	Total Price 2022	Total Price 2023	Total Price 2024	Total Price 2025	Total Price 2026	Total Price 2027	Total Price 2028	Total Price 2029	Total Price 2030		
SAMPLE	100	$10.00	$1,000.00	1.23%	$1,012.30	$1,024.75	$1,037.36	$1,050.12	$1,063.03	$1,076.11	$1,089.34	$1,102.74	$1,116.31		
Ballot Marking Device - (Sample Purchase of 100)	100	$2,800.00	$280,000.00		$280,000.00	$280,000.00	$280,000.00	$280,000.00	$280,000.00	$280,000.00	$280,000.00	$280,000.00	$280,000.00		
BMD Stand (if required)	100	$295.00	$29,500.00		$29,500.00	$29,500.00	$29,500.00	$29,500.00	$29,500.00	$29,500.00	$29,500.00	$29,500.00	$29,500.00		
Privacy Shield/Solution (if required)		$15.00	$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		
Polling Place Scanner, Stand, and Ballot Box - (Sample Purchase of 100)	100	$3,920.00	$392,000.00		$392,000.00	$392,000.00	$392,000.00	$392,000.00	$392,000.00	$392,000.00	$392,000.00	$392,000.00	$392,000.00		
Central Scanning Device		$7,500.00	$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		
CSD Stand (if required)			$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		
Poll Book - (Sample Purchase of 100)	100	$800.00	$80,000.00		$80,000.00	$80,000.00	$80,000.00	$80,000.00	$80,000.00	$80,000.00	$80,000.00	$80,000.00	$80,000.00		
Peripheral Equipment (if required)			$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		
Ballot on Demand		$5,800.00	$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		
Central Ballot Printing		$5,800.00	$0.00		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		
		TOTAL:	$781,500.00	**TOTAL:**	$781,500.00	$781,500.00	$781,500.00	$781,500.00	$781,500.00	$781,500.00	$781,500.00	$781,500.00	$781,500.00	**Total:**	**$7,033,500.00**

DOMINION VOTING™

Our customers come first.

Democracy Suite® System Component Verification Guide

June 21, 2019

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